The White Gods
Caucasian Elements in Pre-Inca Peru

by

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Stone statue at Tiahuanaco, Bolivia. (Photo: *Toucan Press-Wegesch.*)

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LONDON · GEORGE ALLEN & UNWIN LTD / STOCKHOLM · BOKFÖRLAGET FORUM AB

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TRACES OF CAUCASIAN-LIKE ELEMENTS IN PRE-INCA PERU

No Polynesian border in the east except America

The Polynesian island home has flexible ocean walls. America in the east, and the Micronesian atolls and Austro-Melanesia in the west, form its only known frontiers. Inside this vast water basin a fairly recent amalgamation of at least three distinguishable racial elements has formed an anthropological unit, basically composite, but at present thoroughly interbred as one single people distinct from the other families of mankind.

Easter Island is as close to the South American mainland in the east as is Samoa to the nearest atoll of the Carolines in the west, or to the nearest tip of New Guinea or the Australian continent. But though we have no means of judging how near (in miles) to the South American aborigines the Polynesians would have dwelt had there been any habitable island in the empty stretch of ocean between Peru and Easter Island, yet we do know exactly how far short of New Guinea and Australia they halted, since this ocean does contain islands, on which the black-skinned Melanesians have their home. Wherever Polynesian settlers have penetrated into the eastern margin of this domain, their traces are easily identified in race and culture. Both in respect of distance and direction of favourable winds, Polynesian voyages into the adjoining extremities of Melanesia are too obviously feasible to be disputed, so that wherever evidence indicates vestiges of a Polynesian landing in these marginal groups, the theory of diffusion has been accepted without much controversy, and the conclusions of transfer drawn from these vestiges have been accepted as facts rather than theories. It is therefore significant to note that Polynesian vestiges or settlements on the *far* side of Melanesia, or of New Guinea or Australia—nearer Indonesia—have neither been observed nor suggested. All Polynesian and Polynesian-like *traces* cease with the eastern shores—or those exposed to the east—of Papua-Melanesia, whilst Polynesia proper ceases with Samoa, Tonga, and New Zealand.

This means that we can, on one side of Polynesia, draw an anthropological demarcation-line close to the shores of Samoa and Tonga, yet we cannot with the same certainty draw a corresponding anthropological line in the east right up against the shores of Easter Island. The last Polynesian settlement is, indeed, represented by this last island, yet the border between Polynesia and Peru is not there, but just anywhere in the intervening water. We know that Polynesian craft, at the peak of their navigational experience, about the thirteenth century, had a range corresponding at least to the distance Hawaii-Tahiti and vice versa. The narrow margin between the adjoining sections of Polynesia and Melanesia is thus no norm for the width of the Polynesian-dominated ocean. The ocean range of 2 300 miles we know Polynesians to have covered between Tahiti and Hawaii would take a

Samoan voyager on a direct trip to New Ireland in Melanesia, and, at the other end of Polynesia, it would take an Easter Islander well inside any harbour along the coast of Peru and Chile, and even as far as that of Guayaquil in Ecuador.

Comparative chronology limits the Polynesian sphere of influence

With this freedom of movement, the Polynesian islanders of the twelfth and thirteenth centuries may be tossed about over vast ocean spaces by the speculative writer who fails to take other considerations into account. We must admit that the crews of Polynesian sailing canoes, crossing eastward in the thirteenth century with the same tenacity with which they returned to Hawaii from Central Polynesia, could make a landfall somewhere on the long coast of South America. We must also admit that the same crews, having direct access to the New Hebrides from Samoa, could carry on along the coast of New Guinea to Indonesia and Asia. In the latter case, by adding step to step, the Polynesian could get almost anywhere. But of course, like any continental migrant, he set a limit to his own journeys. It is not only possible, but quite probable, that individual Polynesian sailing canoes, in the later expansion period, forced their way to South America, and, in the opposite direction, pushed on with a fair wind to Indonesia, but we must not forget that they would upon arrival be completely lost in a multitude of aboriginals belonging to old and powerful empires and federations.

A boat-load of stone age Polynesians arriving in Java or Borneo in the twelfth or thirteenth century would be annihilated or absorbed by powerful Javanese and Hindu iron age civilizations of the type encountered by Marco Polo when he passed through the Straits of Singapore in 1291. The crews of Polynesian canoes beached on the coast of Peru in the same periods would find themselves just a handful of visitors among the bronze age subjects of great local federations, among whom the Inca dynasty was just rising to power. In neither case would the voyaging party find virgin soil for a homestead, nor primitive savages to impress and inspire with their own neolithic culture. The period of Polynesian expansion comes too late in the history of mankind to permit a boat-load of stone club warriors to create a lasting impression or effect any changes among organized civilizations in the outside world. This is a quite obvious and conclusive reply to the constantly recurring claims that there is evidence of Polynesian influence in Peru. If we analyze the question whether the complex Polynesian island culture may not be receiver rather than the giver in its relation to early Peru, we shall find that this alternative view implies not merely that the voyage went away from Peru with a favourable wind and current, but also that we authomatically shall have to consider a completely different time level for the Polynesian contact with Peru.

Polynesia and the chronology of Peru

If the Polynesians had come from the Old World, and pushed east until a small group reached Peru, they would have reached it at the *end* of their migratory expansion; but, if they moved the other way and *entered* the ocean from Peru, they must have *left* Peru at the very *beginning* of their migratory epoch. We have seen that the fifth century marks the ap-

proximate era when the first migrants entered Polynesia, and that the eastern outpost, represented by Easter Island, was settled at the very opening of this period by men who declared that they had come from a scorched land far to the east, fifty-seven generations before the turn of the last century, according to local genealogy.

This makes a great difference to our chronological approach to the diffusion problem, as it necessarily involves an entirely different time period in our relations with Peru, reaching back into periods antedating the Inca rule, when the extinct high-cultures known to us as Chimu, Nazca, Chavín, and Tiahuanaco flourished in one of their various degrees of progress along the desert coast and in the highlands above the Pacific.

We do not know just when the Incas came into power, but we have a guide in the fact that the hierarchy of Peru also was founded on ancestral worship, with a dynasty who claimed divine origin and thus kept careful track of their own genealogies and family lines. The late arriving Quzco Incas, just like the late arriving Maori-Polynesians, added their own genealogy on to that of their cultured predecessors merely as a subsequent line. (Means 1920 b.)

Bennett (1949) dates the actual Inca rulers from about 1250 A. D., and Means (1920 b, p. xlv) from about 1100 A. D. Even if we allow a fair margin and include more doubtful names in the actual Inca lines, we must admit that a local period corresponding to the fifth century expulsion to Polynesia takes us back to a definite pre-Incaic period in Peru, when not only iron but even bronze and other hard metals were unknown, and when the Peruvian stone adzes were still in use as in early neolithic times, because the gold, silver and copper of the Tiahuanaco periods were all too soft to compete with the better quality of a hard polished stone-blade. (Bennett and Bird 1949, p. 193; Kroeber 1930 a, p. 109.) As well is known, the subsequent Inca had attained a bronze-age culture, but they never reached the iron-age until the arrival of the Spaniards. Iron was never worked in any part of the aboriginal Americas.

As stated, the moment we turn to Peru to seek local *emigrants* instead of *immigrants*, we turn our attention from the Incas and their contemporaries, to cultures of the earlier Tiahuanaco periods. This means that a mere comparison between *Inca* and *Maori-Polynesian* traits and elements will have but little bearing on the question before us.

The dominant Maori-Polynesians of historic times came by way of Hawaii and had, before their arrival, little if anything to do with the former invaders of Polynesia. Roughly about the same time, the Incas rose to power in the east and spread their culture all over the adjoining regions of South America, overlapping all the former and alien high-cultures which had flourished in various parts of Peru since many centuries before the time when the earliest Polynesian settlers established themselves in the adjacent ocean. Instead of here comparing two unrelated invaders, the Inca and the late Polynesian, who came from different sources and conquered different geographical areas, we must look beneath the surface for the possibility that they have both covered up local vestiges of the same stock of culture-bearers.

Since we have seen that A. D. 500 represents the approximate period for the first invasion of Polynesia, it would be a natural step to consider roughly where A. D. 500 would place us in Peruvian chronology.

In South America our means of dating the prehistoric cultural sequences have been very

inadequate (Linné 1939, p. 9), and all proposed datings should, as in Polynesia, be regarded as rather approximate, at least until a further advance in comparative archaeology, or the study of chronology through the recently developed "Carbon 14 method", has given added weight to our present suppositions. Yet we know with certainty that highly developed (but neolithic) cultures flourished in Peru from the earliest Christian centuries, and probably even long before, according to what has been deduced from the recent excavations by Bird. (Bennett and Bird 1949.) Thus the cultural antiquity of aboriginal Peru dates back to periods long before the earliest colonization of the Polynesian islands. We know with equal certainty that in the middle of the first millennium A. D. leading cultures, some of which surpassed and inspired the subsequent culture of the Incas in their artistic taste and architectural achievement, began active trade relations along the Pacific desert coast of South America, as well as back and forth between the coast and the interior highlands of the Andes. The essential local cultures of this important pre-Incaic period were the Early Chimu on the coast of northern Peru, the Early Nazca on the same coast further south, the Chavín of the northern highlands of interior Peru, and the Early Tiahuanaco of the same interior plateaux further to the south. There were also a number of minor subcultures and intermediate stages, encouraged by tribal distinctions as well as inter-tribal trade and diffusion.

One of the most outstanding, vigorous, and widespread of these pre-Inca cultures was that of Tiahuanaco, whose external influences are traceable over vast continental territories of Pacific South America.

Both Bennett (1943, p. 326) and Kroeber (1944, p. 115) show that archaeology reveals the existence, before the era of the Incas, of two great expansion periods in Peru, when in turn each of the two main highland cultures, the Tiahuanaco and the Chavín, spread to attain pan-Peruvian influence. It is furthermore generally agreed that there were also at least two main phases of Tiahuanaco culture. This was first deduced by Posnansky (1914), who argued from an observation of local differences in material and building technique, while Bennett (1934) later found what was apparently a safer stratigraphy in ceramic styles.

On the basis of detailed archaeological information contributed by Uhle, Tello and Kroeber, the noted Peruvian scholar Means (1931, Chap. IV) has given a good summary of the complex problem connected with the distribution of the important Tiahuanaco culture and its influence throughout the Andean area. The same author wrote, with reference to the two distinct periods of Tiahuanaco (1917, pp. 326, 327): "If Tiahuanaco I was probably contemporary with the Proto-Chimu and Proto-Nazca cultures of the coast, Tiahuanaco II is no less probably derived, at least in part, from the latter of those two coast cultures." Further: "It may be true that it is dangerous to measure the actual spread of a culture by the boundaries of the territory within which remains of distinctive products are to be found. *Political* affinities, of course, cannot be determined by any such evidence, but nevertheless, the fact that Tiahuanaco II objects are found from Colombia to Argentina is a proof that the *cultural* dominance of Tiahuanaco II was exceedingly widespread."[1]

Means (1920 b, p. xlv; and 1931, p. 112) further proceeds to establish an approximate

[1] We have found no other references to Tiahuanaco objects found in Colombia, and doubt that such finds have actually been identified, although, as will be shown, several writers claim a *source* relationship beneath the original cultures of San Augustin (in Colombia) and Tiahuanaco.

Peruvian chronology, based on modern archaeological research, and supported—as was the analogous case in Polynesia—by a genealogical list of kings and prehistoric events as preserved by the Inca historians. He dates the Early Tiahuanaco period (Tiahuanaco I) roughly from the second century A. D. until about 500 A. D., and he also considers 500 A. D. to mark the termination of the Early Chimu-Nazca cultures which in the same early Christian centuries had flourished on the Pacific coast down below. According to Means, the Tiahuanaco I culture was restricted to the interior highlands, while the Early Chimu and Nazca cultures sprang up on the coast. At the end of this early period, roughly about 500 A. D., the Tiahuanaco II empire arose and expanded its power right down to the Pacific Ocean, leaving definite traces all up and down the lowlands, and opening active trade relations with the coast that also inspired and affected the highland culture of the subsequent epoch.

We thus see that the Tiahuanaco Empire is thought to have expanded its power down to the Pacific coast of Peru at a period roughly coinciding with the first colonization of Easter Island and the other groups of Polynesia. This is interesting, as the establishment of a pan-Peruvian empire, and the meeting between great and powerful aboriginal dynasties like those along the coastal plains and that of the highland Tiahuanaco, with the victory and extension of the latter, would necessarily involve serious wars and tribal disturbances on the nearest shores east of Polynesia.

Means (1920 b, p. xliv), upon analysing the Inca genealogies pertaining to pre-Inca kings and important events in Peru during their reigns, and allowing 25 years to a Peruvian generation, concluded that the fifth century A. D. was one of the most disturbed periods in the early era of Peruvian culture. In his "Table V: Chronological and Historical Events in the Pre-Inca Period of the Andean Region," he gives the following events, the dating of which, he stresses, is approximate:

"375-450 [A. D.]... Constant Wars with the Chimus on the Coast; The Mountain People Build Fortresses for Protection against Them. Fortress of Huanco Built. A Bloody Battle with the People in the South."

"450-500 [A. D.]... The Power of the Coast People is Limited."

We recall that the historical traditions of Easter Island claimed that 57 generations before Thomson's time—or, allowing 25 years to a generation, about 475 A. D.—Hotu Matua and his followers fled from a desert land to the east and reached Easter Island after combing the ocean westward for 120 days in search of land. Their reason for departure was to escape a superior enemy. Writing of this lonely island, Routledge also (1919, p. 294) emphasises: "They tell us that their ancestors were compelled to leave their original home through being vanquished in war. This was a very usual reason for such migrations, as the conquered were frequently compelled to choose voluntary exile or death; ..."

I do not unduly stress the datings 450—500 A. D. for the victories of the highland people over the fishing population along the Peruvian desert coast, nor the dating 475 A. D. for the flight of Hotu Matua which resulted in the primary discovery of Easter Island. All these data are based on genealogies and are therefore very approximate. But I would like to insist that in the early generations when man first fled into the open East Pacific Ocean, there were outstanding high cultures fighting for possession of the coastal stretch of Pacific

South America, where refugee families, as will be demonstrated later, had no means of concealment in the open desert country, but had the advantage that they could embark in their coastal fishing-craft to seek escape by sea.

We have shown how, in the constantly recurring attempts to demonstrate cultural relationship and racial transfer between Oceania and Peru, it has been taken for granted that an island-bred culture must have been carried over the ocean to South America from the west. This theory has consistently stranded on chronological considerations. Peruvian archaeologists, basing their calculations upon the early results of Uhle, Tello, and others, have long shown that the ancient local high-cultures, like the Early Chimu and the Tiahuanaco I, flourished in Peru as early as 200-300 A. D., or about two or three centuries before culture reached Polynesia. The newly invented method of testing the antiquity of fabrics and vegetable compounds by the "Carbon-14 method" has enabled recent archaeologists to push these Peruvian time limits for local culture back at least another two thousand years. Thus Dr. Junius Bird of the American Museum of Natural History (see also Bennett and Bird 1949), has informed me that remains of cultivated plants, like *Gossypium barbadense*, *Lagenaria siceraria*, *Cucurbita ficifolia* and *C. moschata*, as well as remains of bark-cloth, were found by him at the base of a fifty foot refuse mound on the coastline of Chicama Valley, Peru, and that his own guess as to the antiquity of these remains, later supported by radio-carbon tests, places them in a period between 3000 and 1000 B. C.[1]

Although the antiquity of Peruvian culture has proved to be much greater than what was suspected until Bird's excavations were dated, nothing was found which has changed the time level of the bronze age in Peru, which had not begun in the Early Chimu period of the coast (*Ibid.*; Kroeber 1930 a, p. 109; Bennett 1949, p. 130), and which was thus introduced locally only in periods after the first settling of man in Polynesia. Nor, as shown by Bennett (1949, p. 193), has any bronze been found in Tiahuanaco. Pottery, however, although absent in Bird's earlier culture level on the coast, was by 500 A. D. found everywhere both in the highlands and on the coast of Peru, as opposed to what was the case among the Northwest Coast Indians and the Maori-Polynesians, a fact to which we shall soon return.

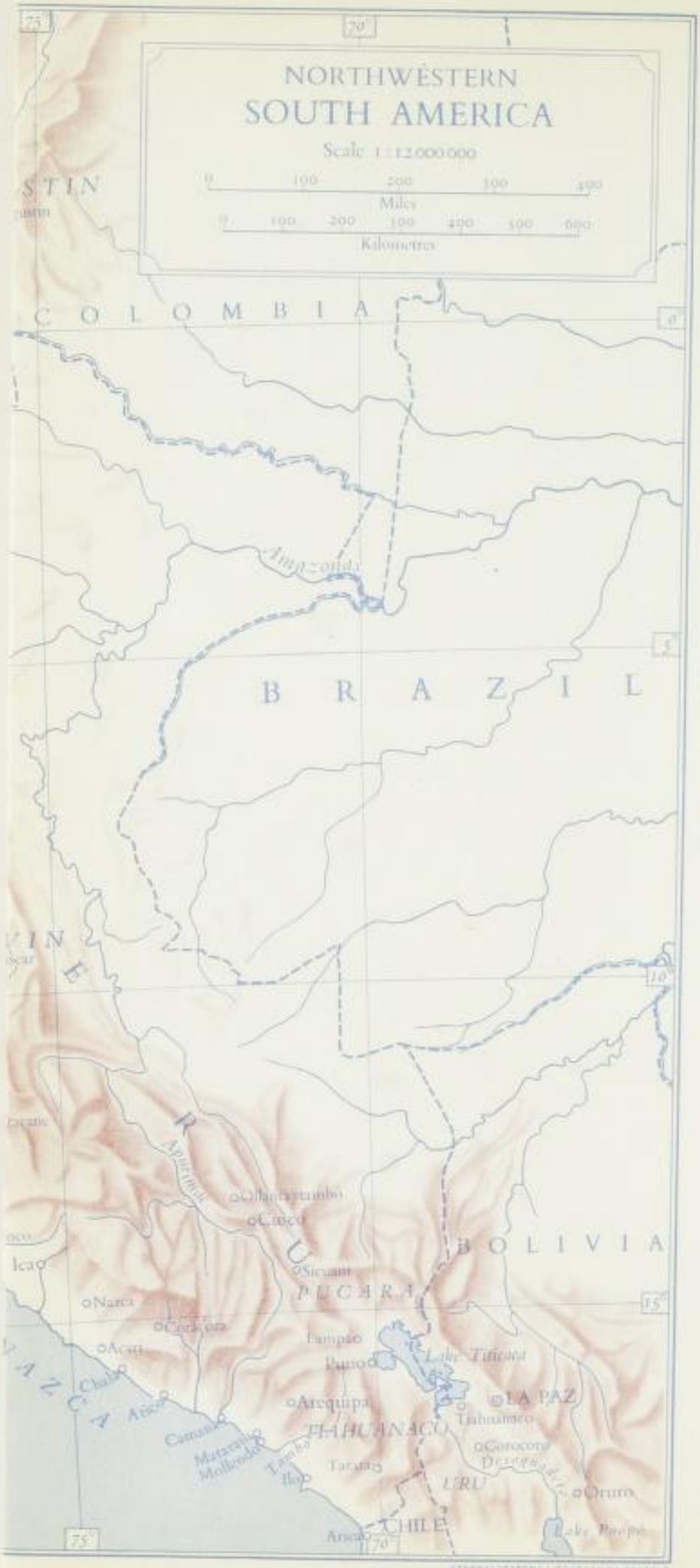
The approaches to information on the Inca predecessors

If the many so-called "Oceanic" elements in Peru actually should prove to be wind- and sea-borne "Peruvian" elements in Oceania, then their occurrence in Polynesia should be investigated with the same objectivity as the wind- and sea-borne Polynesian elements further down in Melanesia. There will be no valid excuse for ignoring the possibility of Peru-Polynesian diffusion the moment we reverse the process and bring elements of great continental high-cultures to small unoccupied oceanic islands, not up towards the east but "downhill" with the winds and the current, and not in an impossible period when the Incas dominated Peru, but in considerably earlier and neolithic Tiahuanaco, Chimu, or Nazca centuries.

It is obvious that a comparative study of surviving modern tribes, like the Kwakiutl Indians and the Maori-Polynesians, is much easier than an attempt to compare two purely

[1] J. B. Bird: Letter 28th March 1949; and *viva voce*.

90°
85°
80°
Cocos Island
Malpelo Island
SAN AUGU
San An
Tumaco
Esmeraldas
QUITO
EQUATOR
MANABI
Manta
Portoviejo
ECUADOR
La Plata I.
B. de Santa Elena
Guayaquil
GALAPAGOS ISLANDS
Isla de Puná
Tumbes
Cape Blanco
Talara
Tangarara
Paita
Piura
Sechura
Marañón
Tarapoto
Lobos Is.
Lambayeque
Cajamarca
Pacasmayo
Chicama
Trujillo
Virú
CHIMU
Chimbote
Paramonga
Chancay
Ancón
Callao
LIMA
Pachacamac
Chincha Islands
PARACAS
ICA
PACIFIC
OCEAN
5°
0°
10°
15°
CARACAS
BOGOTA
Equator
QUITO
LIMA
LA PAZ
RIO DE JANEIRO
SANTIAGO
BUENOS AIRES
Longitude 80° West of Greenwich



GENERALSTABENS LITOGRAFISKA ANSTALT
STOCKHOLM 1952

prehistoric peoples, like the pre-Incas and the very first settlers on the Polynesian islands. Yet even they have left impressions which make it possible to study and compare a great number of their principal characteristics—mainly cultural—but also a number of important racial aspects.

Modern anthropology has shown us that the Polynesian racial type represents first of all a mixture of two distinct physical types, the Mongoloid and the Caucasoid, both strongly represented, and then to a very slight degree some sporadic negroid elements which are only natural because of the proximity of the Austro-Melanesian tribes with whom the Polynesians share frontiers. The modified Mongoloid, which is the dominating physical type in Polynesia, may be explained through a common parentage with the insular tribes of Northwest America, and an arrival of the last immigrant stock from that northern area may also explain a certain proportion of the Caucasoid stamp in Polynesia, but not all. We are therefore still left with the problem of the racial and cultural origin of the first tribes occupying Polynesia prior to the Hawaiki interference. Since the racial complexity of the present Polynesians indicates that these former island occupants have been absorbed rather than expelled or exterminated, we cannot refer to them as pre-Polynesians nor perhaps as proto-Polynesians. They form *part* of the Polynesians if we accept that their descendants are traceable as an element in the present island stock. Since we have chosen the term 'Maori-Polynesian' to describe the dominant type of modern islander, descended from the immigrants who came down through Hawaiki in the present millennium, we may for the sake of convenience use a denomination like 'pre-Maori-Polynesian' or also 'Early Polynesian' to distinguish the first discoverers and settlers. The pre-Maori-Polynesian or Early Polynesian racial type yet to be accounted for is the one who gave so many Polynesian tribes a Caucasoid stamp more marked than even among most Northwest Coast Indians. In Maori-Polynesian memory some of these, their predescessors and part ancestors, were the *uru-kehu* elements, the *Patu-pai-arehe*, described in the island memories as fair and often light-haired people, as sporadically observed in most parts of Polynesia also by the first European discoverers. Neither physical anthropology nor native lore have furnished us with evidence justifying the use of the terms Caucasian, European, or Nordic, occasionally used to describe this non-Mongoloid type, occurring sporadically and quite unexpectedly on the lonely islands of the Pacific. As Ferdon and Reed[1] point out, all we are confronted with are certain specific characteristics of complexion, hair, etc. which indeed are characteristic of some, but not of all members of our own race. Nor do they perhaps cover all characteristics of any Caucasian race. We shall therefore prefer to use the term 'Caucasian-like' to denote non-Mongoloid and non-Negroid elements, like fair skin, soft, fine, or wavy hair texture, reddish-brown or blond hair colour, etc., whenever found on unidentified aborigines outside the territory of Caucasia and Europe. It may also be necessary to emphasize that, although such Caucasian-like individuals were seen and described by the early Europeans, and before them by the Maori-Polynesians themselves and their illiterate historians, yet we always hear of them as individuals or small groups in the midst of natives who otherwise share their main characteristics with the subsequent Maori-Polynesian norm. We may well turn back (to p. 191) and repeat the information Cowan secured from an old Maori expert about this pre-Maori people:

[1] E. N. Ferdon and E. K. Reed, personal communication, letter 21th May 1951.

"In appearance some of them were very much like the Maori people of today; others resembled the Pakeha (or white) race. The complexion of most of them was kiri puwhero (reddish skin), and their hair had the red or golden tinge which we call uru-kehu. Some had black eyes, some blue like fairskinned Europeans. They were about the same height as ourselves. Some of their women were very beautiful, very fair in complexion, with shining fair hair."

To look to Peru for aboriginal Pacific explorers or castaways who included red-haired *uru-kehu* individuals and types more Caucasian-like than even the Maori himself, seems a rather discouraging prospect, at the very best. The physical features of the known Indian tribes of coastal and inland Peru are less Caucasian-like and more Mongoloid than all Maori-Polynesian and most Northwest Indian tribes, at least with regard to hair texture and colour, facial expression, and skin. We might therefore have been led to ignore and overlook any further possibilities in this direction, had not a number of factors to be discussed in later parts urged the impression that, even if there were no apparent racial evidence, there was certainly sufficient cultural evidence in early Peru to require a second glance in that direction. Urged by accumulated archaeological (Part VI) and botanical (Part VII) data, we reconsidered the possibility of what we had first judged to be a fantastic idea, that red-haired culture-people, sharing their general characteristics with the Caucasian rather than with the Mongol race, might have been present in pre-Inca Peru although unknown locally in historic time.

Naturalistic portraiture of models seen by Early Chimu artists some 1500 years ago in aboriginal Peru showed that Caucasian-like types were represented among them although unfamiliar among the local pure-bred Indians of today. (See Plates XXVI—XXVII.) This in itself was a most surprising and stimulating fragment of prehistoric information. Next, by turning our attention to the well preserved Peruvian mummies from the desert tombs at Paracas and other pre-Inca necropoli from later centuries B. C. and the earlier centuries A. D., we found that one of the problems they offered modern science was the colour and structure of their hair. (See Plates XXXIV—XXXVI.) Among those best preserved, which had been kept away both from light and from contact with the sand, some had the coarse, straight and black hair of the Mongol and the average modern Peruvian Indian, but there were also a great number with reddish-brown hair (sometimes interspersed with yellow), and with a fine, silky and sometimes even clearly wavy texture. (Wilson 1862, Vol. II, pp. 228, 235, 246; Busk 1873, p. 313; Reiss and Stübel 1880—87, Pl. 16, 17; Dawson 1928, p. 127; Trotter 1943, pp. 69—75; etc.)

Thus when we venture to check further the possibility of bringing what we have called 'Caucasian-like' elements out of prehistoric Peru, our object is first to test whether or not we have any evidence of such people having ever existed in that East Pacific territory. Not until we have verified this evidence will we be able to judge whether or not there is reason to believe that this people had sent a branch into Polynesia. It should thus be made very clear that the purpose of this part (V) is not to show the evidence for migration, but to show that, contrary to general belief, prehistoric Peru has housed racial elements which in many respects must have approached the characteristics of our own white race, while differing correspondingly from the norm of Quechua and Aymara Indians of our time. We may, in places, draw a few parallels back to the Polynesian territory, but in general our

object is to pave the approach to succeeding parts, by showing that the non-Mongoloid peculiarities of the pre-Maori-Polynesians form no obstacles to a primeval settling of these islands from early Peru, and by pre-Inca voyagers who included among them Caucasian-like individuals with *uru-kehu* hair. The actual arguments for migration from Peru will follow in the later parts.

There are several distinct avenues of approach to gain information pertaining to the now extinct culture-bearers of Peru at the time when the first boats were beached on Easter Island. We may, through archaeology, gain knowledge of their arts and crafts and other aspects principally of material culture. We may also, through ethnology, extract from the social customs and religious beliefs of the Inca such elements as are not original to them but were borrowed from their predecessors. We have also seen that there are different channels of information regarding the physical appearance of the actual bearers of these long extinct Peruvian high-cultures. We may look for their somatological remains in the form of dried-up mummy-bundles or skeletons, and thus judge of individual appearances directly, as far as these remains will permit. We may also look for realistic prehistoric illustrations of racial types depicted in the early period and by the people in question. Oral information may also have survived. The cultural inclinations of the late Incas were focused on ancestral history and pedigrees, and may have carried down to historic times live memories of unusual people or outstanding individuals flourishing in older Peru.

Since we shall in the present part follow each of these approaches, the sequence is not of determining importance. The material vestiges of archaeology will always be the firm backbone of prehistoric reconstructions, yet they may at times remain as backbones only, unless flesh is built upon them by data from written or oral history. We feel that this would be the case with the long known bearded effigy jars and red-haired mummies from the desert graves of early prehistoric Peru, and we venture accordingly to see if they will not attain more vivacity and a better reason for being there when reexamined and judged upon a background of verbal Inca history.

The modern literate has the great benefit of being able to help his overfilled memory by writing notes and narratives. But he sometimes forgets that the minds of early primitives were far from overfilled, and that they were thus able to preserve tribal traditions and ancestral songs often with remarkable accuracy. Inca historical traditions were not fiction or fairy-tales, although full of superstition. They were sincere and deliberate efforts to memorize events as they and their ancestors had seen and interpreted them.

About twelve native generations after Pizarro's conquest of the Inca Empire, Stevenson (1825, p. 401) wrote of the disorganized and illiterate descendants of Inca subjects: "Their veneration for the memory of their Inca (Atahualpa) is beyond description, particularly in some of the interior districts, where his decollation by Pizarro is annually represented." This, moreover, among the lower class of natives, after the passage of post-Columbian centuries disturbing to their way of life, the people lacking a common bond such as that formerly afforded by the organized Inca worship and cult. Twelve similar generations of tradition in *Inca* time would carry us from the Spanish conquest back to the very beginning of Inca history, and one should expect then that the Inca historians who were interviewed by the arriving Spaniards, should have correspondingly vivid memories of some of the highlights in pre-Inca time.

To understand that Inca memories, like those of the Polynesians, stand in a different class from those of the average barbarian, we may note what Sarmiento de Gamboa (1572, p. 40), a famous navigator as well as chronicler, and familiar with the native Peruvian aristocracy after the Spanish Conquest, wrote in his early *History of the Incas*:

"Before entering upon the history of the Incas I wish to make known or, speaking more accurately, to answer a difficulty which may occur to those who have not been in these parts. Some may say that this history cannot be accepted as authentic, being taken from the narratives of these barbarians, because, having no letters, they could not preserve such details as they give from so remote an antiquity. The answer is that, to supply the want of letters these barbarians had a curious invention which was very good and accurate. This was that from one to the other, from father to sons, they handed down past events, repeating the story of them many times, just as lessons are repeated from a professor's chair, making the hearers say these historical lessons over and over again until they were fixed in the memory. Thus each one of the descendants continued to communicate the annals in the order described with a view to preserving their histories and deeds, their ancient traditions, the number of their tribes, towns, provinces, their days, months and years, their battles, deaths, destructions, fortresses and 'Sinchis'. Finally they recorded, and they still record, the most notable things which consist in their numbers (or statistics), on certain cords called *Quipu*, which is the same as to say reasoner or accountant. On these cords they make certain knots by which, and by differences of colour, they distinguish and record each thing as by letters. It is a thing to be admired to see what details may be recorded on these cords, for which there are masters like our writing masters. Besides this they had, and still have, special historians in these nations, an hereditary office descending from father to son. The collection of these annals is due to the great diligence of Pachacuti Inca Yupanqui, the ninth Inca, who sent out a general summons to all the old historians in all the provinces he had subjugated, and even to many others throughout those kingdoms. He had them in Cuzco for a long time, examining them concerning their antiquities, origin, and the most notable events in their history. These were painted on great boards, and deposited in the temple of the Sun, in a great hall. There such boards, adorned with gold, were kept as in our libraries, and learned persons were appointed, who were well versed in the art of understanding and declaring their contents. No one was allowed to enter where these boards were kept, except the Inca and the historians, without a special order of the Inca."

We see, at least, that the Inca historians strove to preserve and memorize information inherited from earlier generations, and we may presume that some main characteristics and outstanding features of the pre-Inca civilizations would survive in Inca Peru just as tribal history survived in Polynesia, and just as the memory of Atahualpa's decollation by Pizarro survived until modern times.

The pre-Incaic importance of the cult site at Tiahuanaco

There is within the borders of the former Inca Empire no prehistoric site with monuments and other architecture of more impressive dimensions, and with evidence of a higher cultural level, than the ancient megalithic ruins of Tiahuanaco in the Bolivian highland plains south of Lake Titicaca. To the Inca and his subjects the ruined site of Tiahuanaco

was the principal edifice of the foreign race that dwelt in their land long before the time of the first Inca. To the modern archaeologist, Tiahuanaco is the focusing centre or at least the best preserved site of the pre-Inca and once pan-Peruvian culture named after its ruins. Yet the real founders of Tiahuanaco and of the culture bearing its name have never been identified (Montell 1929, p. 15; Karsten 1938, p. 28) in spite of the many and diverse theories which bear upon the question. But, although we do not know the tribes or individuals who ordered and directed the erection of the present ruined site, and who carried related art-conceptions far and wide in pre-Inca Peru, yet we must necessarily count with their former existence, since, as shown, the Tiahuanaco cultural influence in its expansion period represents a principal phase in the pre-history of Peru.

As shown above, Means (1931, Chap. IV) has given a good impression of the vivid activity and complex distribution of Andean Tiahuanaco culture and influence in early pre-Inca periods. Bennett (1943, p. 323), a noted Tiahuanaco archaeologist, writes: "Since the beginning of the century the major outline of Andean chronology has been based essentially on the extensive excavations by Max Uhle. Much of the work that has followed has refined the Uhle classification and added other details, but has not made any major changes. The Uhle outline was based on the concept of two pan-Peruvian periods: the Inca period, which had spread throughout a major portion of the Andean region at the time of the coming of the Europeans; and the earlier Tiahuanaco period, which had a somewhat limited distribution from the home site in Bolivia, thence up and down the coast and highlands of Peru, and into Argentina, Chile, and Ecuador."

It is clear that the mobile culture-bearers behind such a dynamic high-culture, which in its art and architecture surpassed (but inspired) the culture of the subsequent Incas, must have included individuals with outstanding intelligence, abilities and ambitions, which cannot be judged by the low standards of the historically known Aymara- (Colla-) Indians of the district. Nor do these local Indians make the slightest claim of descent from the architects and founders of Tiahuanaco, although the colossal ruins are the central element in all their traditions and religious beliefs, just as they were to the aboriginal population in wide regions during the early Inca Empire.

Since the unidentified founders of Tiahuanaco play a principal part in the archaeology of pre-Inca Peru, and since the ruins are venerated by the local Indians both on account of their grandeur and their role in Peruvian traditions and mythology, we must presume that some recollections of the founders of the monuments and walls would survive from one generation to the next, provided the district had not for long periods been entirely depopulated.

The legendary reference to "white and bearded men"

If our supposition is founded in fact, the early immigrants into Polynesia should be linked up with culture-bearers living during the Tiahuanaco periods of Peru. Of the three physical components of Polynesia, these people would represent the Caucasian element. This element is on the islands somatologically identified as an early racial component reaching Polynesia independently, to enter into the subsequent formation of the composite island tribes. It is recalled in Polynesian traditions as the light-coloured children of

Tangaroa, who lived among their ancestors; it is described by the early European discoverers as strongly bearded "white" men among the aborigines, jokingly referred to as "the Fleming" or as "a countryman"; and it is occasionally embodied in the fair *uru-kehu* strain of widely separated islands.

If these early prehistoric voyagers actually set out from the coast of Tiahuanacoid Peru, they must inevitably have been seen and memorized by the local aborigines in the midst of whom they dwelt. On these premises, the contents of the earliest Inca memories may well be worth a new inspection, even though, on account of their seemingly fantastic nature, they have been neglected in most serious studies of Peru.

Until a hundred years ago, the Colla Indians of the Titicaca plateau had preserved traditions associated with the erection of the colossal stone constructions on the plains south of Lake Titicaca. In 1863, Bollaert wrote in his paper on "The pre-Incarial Ruins of Tia Huanaco" (p. 235): "There are vague traditions that Tia Huanaco was built by white and bearded men." Describing the same ancient ruins, Inwards (1884, p. 32) states with Humboldt that ". . . at the arrival of the Spaniards the natives attributed the construction of them to a race of white and bearded men who inhabited the ridge of the Cordilleras long before the foundation of the empire of the Incas."

In 1908, at the International Congress of Americanists, Gonzales de la Rosa brought up the same question (p. 411): "Another problem which presents itself is that of the race which reigned at Tiahuanaco. Were its inhabitants Quechuas, Aymaras, or something else? On this point, more than on any other, the greatest obscurity remains. . . . the tradition, to indicate this discrimination, says that there lived on the islands [of Lake Titicaca] a race described as *white and with beard*—which is the same as in Tiahuanaco—but which cannot be Quechua, although it seems to differ from the present race, and of which one can hardly believe that it was *literally white*."

When the original Quechua and Colla traditions gradually petered out about the turn of the last century, European visitors to the ruins obtained local information only from what they saw, the surrounding natives had nothing else to add. European interest in what had now been reduced to *former* native beliefs decreased accordingly. One may well say that, with the disappearance of the last native accounts orally inherited from the time of local eyewitnesses, Tiahuanaco's last meagre thread of spiritual survival terminated, the ruins became archaeology. To us in our day Tiahuanaco is reduced to a convenient terminology for a wellknown art-style—truly impressive and famous monuments over no one knows what.

During the first generations after the Conquest, however, the myths and traditions of the legendary pre-Incas were still alive in Peru, and when the famous historian Prescott began to analyze the early Spanish documents and manuscripts in the archives of the Royal Academy of History at Madrid, he came to the following conclusion concerning the early Inca beliefs (1847, Vol. I, p. 9):

"The story of the bearded white men finds its place in most of their legends." He also wrote (*Ibid.*): "Another legend speaks of certain white and bearded men, who, advancing from the shores of Lake Titicaca, established an ascendancy over the natives, and imparted to them the blessings of civilization. It may remind us of the tradition existing among the Aztecs in respect to Quetzalcoatl, the good deity, who with a similar garb and aspect came

up the great plateau from the east on a like benevolent mission to the natives. The analogy is more remarkable, as there is no trace of any communication with, or even knowledge of, each other to be found in the two nations."

Cieza's account of "white and bearded men" at Titicaca

Written by a local eye-witness in the years immediately following the Conquest, the early records of the noted Spanish chronicler Cieza de Leon (1553—60) are naturally more important than most subsequent narratives. Cieza was one of the earliest Europeans to visit the ruins of Tiahuanaco on the Titicaca plateau and to collect prehistoric traditions among local natives, who had only known Europeans for a few short years. In his chronicle of Peru (First Part, p. 327) Cieza includes a chapter "On the Tiahuanaco Village and Great and Ancient Buildings Seen there", which represents the first recorded description of this site. He says:

"I asked the natives, in the presence of Juan Vargas who is the one holding authority over them, if these buildings had been constructed in the time of the Incas. They laughed at this question, affirming what has been already stated, that they had been made long before they ruled, but that they could not state or affirm who made them, but that they had heard from their forbears that what is seen now was made in one night. For this reason, and also because they say they have seen bearded men on the island of Titicaca and that the building of Vinaque had been constructed by similar men, I say that perhaps it may be that before the Incas reigned there may have been some people of intelligence in these realms, come from some parts not known, who had done these things, and they being few in number and the natives many they might have been killed in wars."

Cieza's allusion to the "bearded men" of pre-Incaic Titicaca and Vinaque is a direct reference to his own narrative in a previous chapter. (*Ibid.*, p. 314.) There he stated that several Colla Indians had informed him how, at the remote time of the great chiefs Zapana and Cari, who ruled before the establishment of the early Inca dynasty, "white and bearded men" had been massacred on the largest island in Lake Titicaca. Cieza returns to the same pre-Inca people in his Second Part (Chap. IV), saying: "They also tell what I have written in the First Part, that, on the island of Titicaca, in the past centuries, there was a bearded people white like us, and that a chief by the name of Cari came from the valley of Coquimbo, mustering where Chucuito is at present, from where, after having made some new settlements, he passed over to the island with his men, and waged such war on the people of which I speak that he killed them all."

About three hundred and fifty years after Cieza received this traditional information, that is to say about fourteen native generations later, Bandelier (1910, p. 294) went to carry out excavations among the ancient ruins on Titicaca Island in the lake near Tiahuanaco. Fragments of the prehistoric tradition were apparently still alive among the aborigines, for he was enlighted by an 'old native wizard' concerning the earliest days on the island: " 'In very ancient times,' said he 'the Island was inhabited by gentlemen (caballeros) similar to the viracochas' (name given to whites by the Indians to-day). Whence these 'gentlemen' came he knew not." Bandelier's native informant knew that, according to tradition, the said caballeros had intercourse with the local native women, and their children "became

the Inga-Ré (Incas), and they drove out the gentlemen and held the Island thereafter." Whither the expelled caballeros or viracochas retreated, the local islanders could not tell. Bandelier adds that: "The 'Viracochas' here mentioned recall the 'white and bearded men' of Cieza."[1]

Garcilasso and other early historians will later show us how the distant family of the Inca, dwelling three hundred miles to the north, pointed out that their progenitors, the first Incas, emerged from this very island in Titicaca to make their way northwards to Cuzco and establish their sovereignity over the Peruvian peoples. Various other early chroniclers will tell us how the natives in wide parts of Peru had the inherited belief that this same island had been the chosen home of a group of fair-skinned people with beards, who had been very active spreaders of culture before the Incas came to power. Generally we learn that some such "white" men left Titicaca Island for the neighbouring Tiahuanaco, moving down subsequently from the highlands to the Pacific coast; but we sometimes learn of the defeat or murder of similar men who still remained on Titicaca Island. Bandelier (*Ibid.*, p. 327) cites Ramos, who also spoke of "a mysterious white man called Tunupa and Taápac" whom the early Indians remembered having killed on Titicaca Island. In other local dialects this legendary "white man" is referred to as Tonapa and Tarapaca, and also as Tupaca.

The "white and bearded men" near Ayacucho

During my visit to Peru in 1947, I was informed by Dr. Luis Valcárcel of the Museo Nacional in Lima, that the tribes near Ayacucho, in the cordilleras between Lima and Cuzco, had until recent years upheld the same tradition from the time of Cieza: that the local and pre-Incaic Vinaque ruins had once been built by a race of men "white like Europeans", who had lived among their ancestors in the dim past of Inca history. Cieza (1553—60, Chap. LXXXVI) gave the same account of these particular ruins *some four hundred years ago*, when he arrived in Peru in the decades of the Conquest. Speaking of these "great and very ancient buildings" on the river Vinaque, he says: "When I questioned the neighbouring Indians as to who had made that monument of antiquity, they answered that it was another people who had been bearded and white like ourselves, who they say, came to these parts a long time before the Incas reigned, and made their residence there."

The Viracocha-people

Karsten (1938, p. 194) cites the ancient writings of Huaman Poma Ayala concerning the traditions of the former inhabitants of Peru. Huaman Poma was a native Peruvian who was himself instructed by the trained Inca historians, the socalled quipucamayocs, concerning the earliest Inca knowledge. From him we learn that "the first race of man that dwelt in Peru" was called *uari viracocharuna*. The suffix *runa* is merely the Quechua (Inca) word for "people", and we recognize thus in this name the word viracocha, which is, as cited from Bandelier, the Quechua term for all past and present peoples with "white" or very

[1] Bandelier (*Ibid.*, p. 66) shows that the Indians of Titicaca Island possibly were forced, by the pressure of official Spanish measures, to move over to the mainland for a few years at the close of the sixteenth century, but they soon moved back again. He adds: "...but there seem not to have been any white settlers on it until the eighteenth century, or perhaps later."

light skin colour. Viracocha is also used by the Inca as the name of the leading pre-Inca hierarch and man-god who was to the earlier people in Peru precisely what the later Inca actually was in the eyes of his subjects, a divine representative of the sun among its human descendants. Whether these pre-Inca *uari viracocharuna* gave their name to the Inca god and progenitor *Viracocha*, or whether they are named after him, may be difficult to determine without a further analysis of Peruvian beliefs and tradition. In all likelihood *Viracocha* was originally a descriptive term or hereditary title rather than a personal name of one distinct individual, just as *Inca* subsequently became the hereditary title of a whole dynasty. Similarly among the Aztecs, Quetzalcoatl was a principal god and progenitor, and yet the same name was the name or title of his successive line of leading priests.

In Inca history, as in our own, we naturally find that the doings of the mass of the people play a less important role in oral tradition and written narrative than do the travels and activities of a king or emperor. To learn more about the *uari viracocharuna* or viracocha-people we may therefore turn our attention to their chief, remembered as Viracocha, or Con Tici Viracocha. With his activities begin all the earliest Inca memories of events leading up to the introduction of cultural ideas among the primitive Indians in Peru. It is our object, not to dwell on myths and superstitions, but to extract from them the kernel of historic truth which is to be found wherever tradition survives for centuries among a numerous and widespread population who take a keen interest in the preservation of their own tribal histories. We need not take any definite attitude to whatever impression the Inca conceptions may leave behind, until we find them to coincide, as in Polynesia, with better evidence than tradition.

A beardless nation with a bearded culture-institutor

The memory of the hero-god Viracocha was vividly preserved among aborigines in wide regions of the former Inca Empire, even through the last century, and in many places Viracocha stories still survive to-day among the elder natives. A good synopsis of the Viracocha-traditions is included in Brinton's monograph *American Hero-Myths*. (1882, pp. 169-202.)

Brinton (*Ibid.*, p. 192) quotes Zegarra, a leading contemporaneous Peruvian scholar, in saying: "The tradition was that Viracocha's face was extremely white and bearded." Brinton adds himself: "There is, indeed, a singular uniformity of statement in the myths. Viracocha, under any and all his surnames, is always described as white and bearded, dressed in flowing robes and of imposing mien."

"Long-Eared" Islanders in Lake Titicaca

Beyond his growth of beard and his lighter skin there was nothing strange in Viracocha's own build, yet he taught his Peruvian followers to change artificially their natural visage. Bandelier (1910, pp. 304, 305), who collected the Titicaca island legend of the expelled viracocha "gentlemen", also pointed out that in several myths Viracocha himself was remembered as the chief of a "large-eared" people that were the first inhabitants of Titicaca Island. These Islanders called themselves *Ringrim*, signifying "ear", since their ears were perforated and a heavy nugget inserted to enlarge the aperture. Tradition states that this

"large-eared" people was instructed by Viracocha in building stone edifices and fortresses, including the megalithic constructions of the "House of the Sun". The Titicaca islanders, as Bandelier told us, preserved the tradition that the children of the early light-skinned men, by the native women, grew up to become the Inga-Ré or Incas. In relating how Titicaca Island was associated with the origin of the Incas, Oliva (1631, p. 37) relates an Inca tradition to the effect that "they pierced their ears and placed in them large rings of a kind of reed called totora, and subsequently enlarged these rings enormously."[1]

Montell (1929, p. 217), citing Oliva and other sources, mentions that the Incas forbade their subjects to enlarge their ears to the same extent as their own. He shows that the reason for Inca ear-enlarging is unknown beyond its traditional and apparently magical nature. The fact that subsequent Inca generations had to go through the ear-piercing and enlarging ceremonies at the principal solar festivals (Capac Raymi) "must go to show that the occasion was looked upon as being a highly important one."

Markham (1911, p. 67) says: "The custom of boring their ears and enlarging the lobes until they were a great length, which prevailed with the Incas, their relations, and the ten ayllus, obtained for them the name of Hatunrincriyoc, or great-eared people, which the Spaniards turned into Orejones." (See also Cieza, 1553—60, Chap. VII, p. 24.)

Pedro Pizarro (1571 b, p. 275), who arrived in Peru with his cousin Francisco during the conquest, wrote: "There were some orejones who had ears so large that they came down to the shoulders. He who had the largest ears was held to be the finest gentleman among them."

We recall how Easter Island traditions insist that there were "long-ears" among their ancestors when they arrived from the scorched land to the east, that is to say, from the direction of the contemporaneous Tiahuanaco Empire. We may therefore, in the following extract from Betanzos, observe that Con-Tici Viracocha's last lesson to his successors in pre-Inca Peru—before he departed into the Pacific—was the art of enlarging their earlobes, thus to remain "long-ears" after he had gone.

Tiahuanaco—cult centre of the Viracocha-people

Juan de Betanzos (1551) had an unusually good opportunity of collecting and preserving the aboriginal Peruvian beliefs and traditions. He came to the Inca Empire when it was first discovered and conquered, and he married a local Indian girl, so that he was in intimate contact with the natives, among whom he stayed for the rest of his life. Like nearly all the other early chroniclers he pays much attention to the Peruvian accounts of the pre-Inca culture-bearer Viracocha, or Con Tici Huiracocha.

Betanzos (*Ibid.*, Chap. I) wrote: "In ancient time, they say, the country and province of Peru was in darkness, having never light or day. There were, at the time, certain people in it, which people had a certain chief who commanded them and to whom they were subjected. Of the name of the people and the chief who commanded them they have no re-

[1] Bandelier (1904, p. 200) also quotes Oviedo, who said of Cuzco: "To this land there came in ancient times, a great lord with a people they call Inga, and now they call themselves Big Ears, and only the Supreme Lord they call Inga..." Imbelloni (1926 b, p. 339) compares the old Quechua word *Inga* with the Maori term *Inga* meaning "soldier", "warrior"; and also with the Maori term *Inga-nui*, literally "Great-Inga", which means "god", "spirit". In Fidji *singa* is the word for the "sun".

collection. And in those times, when all was night in this land, they say, that from a lake in this country of Peru, in the province of Collasuyo, there came a chief called Con Ticci Viracocha who, they say, had with him a certain number of people, which number they do not recollect. And after he had sallied from this lake he went from there to a site that is close to this lake, where to-day is a village called Tiahuanaco, in the aforesaid province of the Collao. And as he went thither, he and his own, forthwith there improvisedly, they say, that he made the sun and day, and ordered the sun to move in the course it now moves and afterwards, they say, he made the stars and the moon."

The lake referred to can only be Titicaca, where Viracocha, according to most Inca accounts, began his religious activities. We recognize how native Peruvian superstition in this legend strives to associate some important event in the history of the sacred Inca with the people's own religious conceptions. It would appear that an historic hierarch with a solar cult had established himself in Tiahuanaco with his religious followers—identifying himself—like the subsequent Incas—with the earhtly representative of the supreme god. From archaeological research we know well enough today that Tiahuanaco was no ordinary village, but the religious centre of one of the most important pre-Inca hierarchies. The possibility that Viracocha was an hereditary title common to the supreme god and his principal representative on earth, is apparent when we learn through Betanzos (*Ibid.*) that Viracocha only "returned" to earth when he moved with his followers from the shores of Titicaca to the nearby site of Tiahuanaco. Long before this appearance he had, according to Betanzos' informants, created heaven and earth and the original population of the country who dwelt in darkness until he came and established himself in human shape at Tiahuanaco.

Betanzos (Chap. II) says: "...when I asked the Indians what shape this Viracocha had when their ancestors had thus seem him, they said that according to the information they possessed, he was a tall man with a white vestment that reached to his feet, and that this vestment had a girdle; and that he carried his hair short with a tonsure on the head in the manner of a priest; and that he walked solemnly, and that he carried in his hands a certain thing which to-day seems to remind them of the breviary that the priests carry in their hands. And this is the account I received on this subject, according to what the Indians told me. And when I asked them what this person called himself...they told me that his name was Con Ticci Viracocha Pachayachachic, which in their language means God, Maker of the World."

The Viracocha hierarchy and Tiahuanaco stone statues

Betanzos goes into great detail about Viracocha's activities when he reigned in Tiahuanaco before the first Incas came. We learn from his early narrative that Viracocha began his religious activity in Tiahuanaco as a sculptor of stone. From stone he made human statues as models for the new people he was to create. He sculptured a certain number of men and a chief who was to govern them, as well as several pregnant women and other women who already had children. When these stone statues were finished he had them moved to other places; whereupon he created a community in Tiahuanaco also by carving them from stone in the same manner.

It is noteworthy that according to the legend, Viracocha created man in his cult site at Tiahuanaco *at a time when a more primitive local population already existed in Peru;* but, all according to the same legend, this former people were said to have lived in darkness and ignorance. It is apparent that the account of Con Tici Viracocha and his disciples making man by carving and moving statues, is either a version evolved by the subsequent Inca to account for the images in the cult centre at Tiahuanaco—where they are still to be seen (see Frontispiece, Plates XLI, XLV, IL, LII)—or, what is even more probable, that the Tiahuanaco statues were actually built by a priest-king or hierarchy for a magical purpose, to impress the contemporaneous aborigines with their own supernatural powers and activities. The latter explanation seems the nearest to hand and most logical.

When Con Tici Viracocha's sculpturing at Tiahuanaco was finished, he is said, Betanzos tells us, to have ordered his own original followers (the viracochas who had originally accompanied him to Tiahuanaco and whose number was not remembered) all to go away except two, who were to remain with him. He first told his departing viracochas that they were to observe the Tiahuanaco stone statues and the names he gave to each kind. Pointing to the statues he said: "These should be called so and so and should appear from such-and-such spring in this or that district and should inhabit it and multiply there; and these others should appear in such-and-such cave and should be termed so-and-so and settle there and there; and such as I have pictured them and made them in stone they should appear alive from the springs and rivers, caves and mountains in the provinces which I have told you; and afterwards you should all go in that direction—whereby he pointed to the direction where the sun rises—and spread them out separately, showing them the road each of them is to take."

In his next chapter, Betanzos narrates: "As stated the huiracochas set out and walked through the districts which Viracocha had pointed out, and wherever they went they called, in the district where they were, for the people whom Viracocha in Tiahuanaco had pointed out on the stone statues that were to appear in that place. This was done by each and one of the viracochas by standing in the neighbourhood of the place where he was told that the people should appear, and there the viracocha called out: —So and so, come forth and people this earth which is waste, because that is the order of Con Ticci Viracocha, he who created the earth!—And as they called on the people in this manner, these appeared in the districts and places told by Viracocha. And it is said that they proceeded in this manner, calling and bringing forth people from caves, rivers, springs and the high mountains, as said in the previous chapter, and that they peopled the country in the direction where the sun rises. And when Con Ticci Viracocha had accomplished this and in the manner already stated, even the two who remained in Tiahuanaco are said to have been sent out by him to call and bring forth people in the said manner; whereupon he separated them as follows: He sent the one to the province Condesuyu [=Cuntisuyu], that is to the left when one is standing in Tiahuanaco with the back towards the sun-rise, that he in the same manner as the others should call forth the native Indians in the province of Condesuyu; correspondingly he sent the other to the province Andesuyu [=Antisuyu], which lies to the right if one, as said above, turns the back towards the sunrise. And after these two had been sent out, it is said that he himself also started out along the road leading to Cuzco, which lies between the two provinces, and he proceeded along the

main road, which leads over the mountains to Caxamalca [=Cajamarca]; along this road he walked and called and brought forth people in the said manner. He arrived at a province called Cacha which belongs to the Canas-Indians and lies 18 leguas from Cuzco, and in this area he called forth the Canas-Indians. When these appeared, they were armed, and when they saw Viracocha and did not recognize him, it is said that they came against him in a crowd to kill him, and when he saw them coming and realized why, he caused fire to fall from the skies and begin burning a hill near the place where the Indians were. And when the Indians saw the fire and were afraid to be burnt up, they dropped their weapons and ran forth to Viracocha, throwing themselves on the ground before him. When he saw this, he took a staff in his hands and went forth to the fire and gave it some blows with the staff until the fire was put out. When this was all over he spoke to the Indians and told them he was their creator. On the spot where he had placed himself to let the fire fall from the skies and from where it would have spread to destroy the Canas-Indians, these built later a marvellous *huaca*, in wich they and their descendants offered great quantities of gold and silver and where was raised a statue carved from a great stone almost five varas (about 12 ft) tall and 1 ½ varas broad or a little less. This they did in memory of Viracocha and what had happened at this place; they say that they have carried it on from that past time until this day."

We shall later see that this statue of Viracocha in the *huaca* at Cacha was still intact at the time of the Conquest, and that the Spanish discoverers found that the large stone image "represented a man of good stature, with a long beard measuring more than a palmo..." (Garcilasso 1609 b, p. 70.) The temple and statue was later deliberately destroyed by the pious Spanish clergy.

The Viracocha-people unite in the north to start "walking" into the Pacific

Before Betanzos follows Viracocha on his final march along the ancient mountain road northwards from Tiahuanaco, he says that he had himself visited the said temple and the burnt hillock, where the account of Viracocha's journey through this district had been told him by the eldest and most important of the Indians whom he had summoned from the neighbouring village. Betanzos then follows the principal of the "viracochas" on his further move:

"To return to our narrative, it is said that he, having accomplished this wonder in Cacha, continued his road carrying out his activities as before said, and as he arrived in a place which is now called Tambo de Urcos, and which lies six leagus from Cuzco, he proceeded up on to a high mountain and sat down on the summit, where he is said to have ordered the native Indians who now live there to appear from the mountain side. And because Viracocha sat there, a rich and marvellous *huaca* was erected on this spot, in which—since Viracocha had seated himself in this place—those who built this *huaca* placed a bench of gold, and the statue which represented Viracocha was set on this bench; the gold statue represented sixteen or eighteen thousand pesos at the division made between the Spaniards in Cuzco when they had captured the city. And from there Viracocha went on and continued, while making his people as already described, until he arrived in Cuzco. Upon his arrival there he is said to have made a chief whom he called Alcaviza, and he also

named this place Cuzco. And upon leaving orders as to how they should produce the *orejones* [long-ears] when he was gone, he continued further, while doing his works. And when he arrived in the province of Puerto Viejo [on the Pacific coast of the present republic of Ecuador], he joined up in that place with his own people whom he had sent out beforehand in the manner I have described earlier. As they assembled in that place, he placed himself on the ocean together with them, wherefore it is said that he and his own people went on the water just as if they were walking on land. I could have written much more about Viracocha according to what these Indians have informed me of, but to avoid being tedious, and to avoid serious heathenism and inhumanity, I have not included it."

Obviously there is a kernel of history within these geographically continuous and vivid memories of Con Tici Viracocha and his many "viracocha" subjects or disciples, who first moved south from Titicaca Island to their hierarchic abode at Tiahuanaco, and finally northwards through Peru by way of Cacha, Tambo de Urcos, Cuzco, and down to the Pacific coast of Ecuador at Puerto Viejo, all before the beginnings of Inca genealogy. It is clear that the Aymara and the Quechua Indians, whose early ancestors must have known Tiahuanaco at the time of its habitation, have in these detailed accounts memorized some episode connected with the final desertion of the hierarchic site, with the departure of its priest-king and his viracocha family or followers. There is little to be added about their mysterious man-making activities until we later consider the Tiahuanaco monoliths and human stone busts of pre-Inca origin left in various places in the Titicaca basin and on the Andean plateau. But we may note that the assembling of the viracochas, who had all deserted Tiahuanaco to unite on the Pacific Coast in the northern province of Puerto Viejo, coincides with the best locality for South American navigation and boat construction. The local craft of Puerto Viejo and its vicinity were the balsa rafts described later, and the sight of men moving about a balsa raft at sea will, to those on the shore, most emphatically leave the impression that the crew actually wade about unsupported, knee deep or even further than the waist in the waves. In reality they may not even wet their feet, but the view of the low-lying logs is blocked by rows of alternating waves even in a slightly chopped sea.

There are no later memories of these pre-Spanish viracochas except that they left in one party from this northern part of the subsequent Inca Empire. This is stated by Betanzos in his own captions to the chapter cited, which run as follows:

"How the people of this land were brought forth on the command of Viracocha, and as regards those viracochas which he sent out in this errand; and how Con Ticci Viracocha set out in the same manner, and about the two who stayed with him to carry out the same work; and how, upon finishing all this, he assembled with his own people and went out on the ocean never again to be seen."

The identity of the creator-gods Tici of Peru and Tiki of Polynesia

It is permissible momentarily to interrupt the survey of the Inca accounts of the viracochas and their chief with the prefix, title or personal name, Con-Tici, and see if their disappearance into the Pacific can be found also in Polynesian myths and traditions on the islands in the adjacent ocean. In doing so, we may first note the following limitation by

Means (1931, p. 422): "The Creator-god most celebrated in the Chronicles of Peru is known under various names which are definitely associated with the Tiahuanaco II period. He has generally been referred to as Viracocha or as Pacha-Camac, the former designation being used in the highlands, the latter on the coast. Both of them, however, are Quechua and, consequently, more or less late in date. It seems clear enough that pre-Incaic names for the Creator-god were Con, Con-Tici, Illa-Tici, and sundry approximations thereto, sometimes prefixed to the name Viracocha in later times..."

Since the Quechua is the modern Peruvian tongue spoken and introduced by the Inca, it would be fruitless on chronological grounds to try to trace the name *Viracocha* in the Polynesian island world. We shall have to consider instead his original pre-Inca names *Con*, *Con-Tici*, and *Illa-Tici* for relationship to some creator-god or royal progenitor in Polynesian mythology.

It will later be seen that *Con* was originally the full name or title of the creator and sun-god on the North Peruvian coast, while *Tici* correspondingly was the name for the same culture-hero in the Peru-Bolivian highlands. The prefix *Illa* has survived in modern Quechua as a word for "light". (Tschudi 1853 b.) Returning to a fuller discussion of the associated terms *Con* and *Illa* later (Part X), we shall here concentrate on the name *Tici* since it is most intimately associated with the pre-Inca monarch of Tiahuanaco. With the prefix *Illa* meaning "light", and *Con*, being an alternative name for the creator, we know that the early Peruvian culture-hero *Con-Tici* or *Illa-Tici* was venerated as Tici-the-Creator and Tici-the-Light.

Tici is a word of ancient origin, adopted in Quechua mythology from an earlier language, distinct from their own. It is preserved as a live word in Quechua dialects either as *tecsi* or *ticsi*, meaning "origin". (*Ibid.*) Thus Markham (1920, p. 10) says, in referring to Blas Valeras, the best informed mestizo chronicler of the sixteenth century, whose major works are unfortunately lost: "The names given for God by Valera, as used by the ancient Peruvians, are also given by some others of the best authorities. They are ILLA TICI UIRA COCHA. The first word means light. TICI is the foundation of things, or beginning."[1]

In a few cases, the early Spaniards—who had no *k* in their alphabet—have spelt the mythical name as *Ticci*, and in a manuscript by Betanzos the original spelling by him was *Titi*, later corrected to *Tici* to confirm with the general Spanish spelling. If the same European orthography had been used in rendering Peruvian names as is used in Polynesia, the name of the deity would have been rendered as *Tiksi*, *Titi*, and *Tithi*, and to the Polynesian who never have double consonants, nor the equivalent of the Spanish *c*, the name would be *Tiki*, *Titi*, or also *Ti'i*.

It is interesting, when we now turn to the Polynesian islands in the adjoining part of the ocean, to find, as Izett (1904, p. 22) shows, that: "Tiki is the name borne by a deity or demigod well known to all the people throughout the islands of Polynesia. There be those who hold that the original creation of man owns Tiki for its authorship, whilst others—no less confident, it is proper to state—affirm that Tiki occupies no higher position than that of the first man created."

Stolpe (1891, p. 206), in an attempt to analyze the implications of the Tiki traditions

[1] Inca Garcilasso (1609 b, Vol. II, Chap. 2) says that neither he nor the Indians knew the exact significance of the name Tici.

throughout Polynesia, writes: "In Rarotonga, Tahiti, and New Zealand he is considered to have been *the first man*. He is the prototype of a great group of divine beings, all of whom have been ordinary men who have after death been promoted to be gods of a lower rank than the previously mentioned actual gods, and who are collectively called *Atua*. *Tiki*, regarded as a class of gods, are thus the ancestral spirits, to which are attributed divine worship. Thus they are the protecting spirits of their own descendants and are venerated with images in which they take up abode on certain occasions. Such images are found in many forms, from the colossal stone statues of Easter Island to the small portable images of polished nephrite which are worn by the Maori."

Métraux (1940, p. 315) tells us from Easter Island, nearest to Peru, that: "Although Makemake absorbed his personality, Tiki, the first man or the creator of mankind, is mentioned several times in the creation chant."

In the Marquesas, Tiki is today a collective name for the local stone statues, and also for any ancestral image. Yet Tiki is at the same time the specific name of the creator and the principal man-god who was worshipped by the Marquesans' progenitors from the earliest times, long before he led them on their voyage into the Pacific.

In the Society Islands Ti'i (Ti(k)i) according to Ellis (1829, Vol I, p. 112-114) was the first king to dwell in "the world of *light*." The same early authority states that the local natives considered Tangaroa (in Tahitian dialect Ta'aroa) and Ti'i "to be one and the same being". We recall from Tonga that this Tangaroa was the culture hero who brought man into the Pacific, and the guardian of the "white" aborigines. In Mangaia he was even considered the progenitor of all red-haired elements in the aboriginal population. Again Ellis (*Ibid.*) shows that Ti'i (*alias* Tangaroa) was the son, or grandson, of the sun and the moon, in which peculiarity he even found that he resembled the first Inca ancestor in Peru.

In one of the Hawaiian legends *Ti'i*, pronounced locally as *Ki'i*, was the first man-god who arrived in the aboriginal world contemporary with the creation of the first light, at the termination of a primeval period of profound darkness. (Buck 1938 a, p. 245.) The first king to settle and rule in Hawaii claimed Ki'i (Tiki) as his father. Fornander (1878, Vol. I, p. 168) realizes that this mythical ancestor of the first Hawaiian king coincides with the one who brought the Tahitian dynasty from the "world of light" to Tahiti. He writes: "Tahitian legends claim that one *Tii* was the first ancestor of Tahitian chiefs on Tahitian soil. . . . But Hawaiian legends claim this same *Tii* or *Kii*—who was the last of the thirteen from *Wakea* that lived elsewhere than on the Hawaiian group—as the father of *Nanaulu*, with whom Hawaiian aristocracy on Hawaiian soil commences; while his brother *Ulu* remained at the south,. . ."

On some of the other islands, like Tokerau, the ancestorgod *Tiki* is spoken of as *Tikitiki*, which again in a great variety of Polynesian myths is used as a venerated epithet to the name of the first heroic voyager into Polynesia—the great island discoverer and mythical fisherman *Maui-Tikitiki*.

Tiki (or Tikitiki) is in Samoa pronounced Ti'i, as in the Society group, but in Tonga the name is pronounced *Kisi*, and *Maui-Kisikisi* appears in the local myths of the earliest island discoveries. (Buck 1938 a, pp. 288, 290; etc.)

When we recall that the semi-solar Tici of Peru was remembered over vast territories of the Inca Empire as an early hierarch who left Peru in pre-Inca time on an organized

expedition into the East Pacific, it is certainly remarkable to find memories throughout Polynesia of a semi-solar progenitor Tiki (occasionally pronounced Ti'i, Ki'i, or Kisi) who everywhere began the earliest Polynesian island history. Buck (1949, p. 452) came to the following conclusion concerning this pan-Polynesian culture-hero: "Tiki was regarded as a definite individual, who was the first man in various parts of Polynesia, including the Society Islands (Ti'i) and Hawaii (Ki'i). The persistence of the same concept among some of the Maori tribes shows that it was carried to New Zealand from Central Polynesia."

A further comparative survey of the Peru-Polynesian creation myths concerning the activities of the earliest man-god Tici, Tiki, or Ti'i, will be made in a later part (X); here we shall only consider a few of the names associated with the Polynesian Tiki cycle, to establish beyond the range of coincidence that the Peruvian Tici worship and the Polynesian Tiki worship must have a common geographical origin.

Taranga—Taranga

Percy Smith (1922, p. 93) shows how the Tokerau islanders have a tradition that their island was "fished up out of the ocean" by Tikitiki and *Taranga*. Turner (1861, p. 253) shows that in Samoa Ti'i-ti'i (Tiki-tiki) was a "son" of Taranga (Talanga). Percy Smith (*Ibid.*) shows further that this mythical island fisherman Tikitiki was identical with the general Polynesian island-fisherman Maui, whose full Maori name is Maui-tikitiki-a-Taranga, or Maui-tikitiki of Taranga, "the latter being his mother." Fornander also (1878, Vol. I, p. 199) points to the close connection between the names Tiki and Taranga, showing that Maui-tiki-tiki was the youngest son of the family of Taranga, according to a tradition "found upon all those groups in slightly different versions."[1]

This again is interesting, because *Taranga* was the name of one of the earliest aboriginal tribes inhabiting the shores of Lake Titicaca (Posnansky 1914, p. 42; etc.) in the vicinity of Tici's centre of creation at Tiahuanaco. Together with the Uru-Indians, who inhabit the east banks of the river Desaguadero, the Taranga-people happens to be one of the oldest and most important tribes just in the area near Lake Titicaca where Tiahuanaco is located, and many places in the vicinity are named after Taranga.

Uru—Uru

We cannot mention the *Taranga* of the Titicaca basin without including a word on the *Uru*, whose traditions connect their ancestors with the building period of Tiahuanaco, or rather *Chucara*, which was the pre-Inca name of the present ruined site. Posnansky (1914, p. 91) shows that, according to Uru traditions, some of their forefathers had been buried as living sacrifices under the edifices of Tiahuanaco during its construction, an indication of the antiquity of this people in the neighbourhood.

Montell (1929, p. 8) says of the prehistoric inhabitants near the southern borders of

[1] Buck (1938 a, p. 288) shows that Samoan myths give Talanga as Maui-ti'iti'i's "father", whereas New Zealand myths give Taranga as Maui-tikitiki's "mother". The latter conception seems to be the more general one in Polynesia. This slight uncertainty as to Taranga's sex also indicates that the name is an allegorical reference to a family or tribe rather than to an individual ancestor.

Peru: "With this primitive culture of the ancient fisher peoples of the Arica regions it is usual to associate the Urus, a tribe whose remnants are still living on Rio Desaguadero. These Indians constitute the meagre residue of a population which was formerly widely distributed. In them Uhle sees the descendants of the aboriginal dwellers on the Bolivian highlands. Uhle has made a research of the place-names and thus formed the conclusion that the Urus once inhabited even the coastland as far as Cotaguita and the upper portion of the Rio Loa Valley, and in the north extended up to Lake Titicaca, and in the northwest to Nasca. In the opinion of Boman, they occupied the entire southern part of the Peruvian coastland, nor does this seem at all improbable."

In Polynesia, we find that the name Uru (also Ulu, according to dialect), is remembered as that of a principal people either living in—or else bordering on—the ancestral abode of the creator Tiki and the island-fisherman Maui-tiki-tiki with his maternal Taranga family. We have just seen with Hawaiian legend that Uru (Ulu) was the one of Tiki's (Ki'i's) "sons" who remained behind in Tiki's original land, when Tiki's other "son" emigrated to establish the first dynasty in Hawaii.

Best (1923 b, p. 12) wrote: "We now come to two highly interesting names connected with the origin of the Maori, namely, those of Uru and Irihia. The East Coast natives of our North Island have preserved the following tradition of the original homeland. In remote times the ancestors of the Maori dwelt in the lands of Uru and of Irihia, two distinct regions of, apparently, an extensive land." He shows (*Ibid.*, p. 14) that the same early reference to Uru is preserved also in other sections of Polynesia: "The Hawaiian Polynesians have preserved a tradition of a land or region called Ulu-nui that lay adjacent to the old home of their ancestors. In our New Zealand dialect this name would appear as Uru-nui (Great Uru)."

Searching westwards of Polynesia for a name corresponding to the Uru of Polynesian memories, Best, like Fornander, Fenton, Percy Smith, Perry, and many others, shows the necessity of going as far as to Asia Minor to find an analogy. He says (*Ibid.*, p. 14): "In the southern part of Sumeria, near the mouth of the Euphrates river, as then situated, existed about 2800 B. C. the flourishing state of Uru, known as Ur of the Chaldees to readers of the Scriptures."

The fact that the early Uru nation of Pacific South America was contemporaneous with Tici, the legendary founder of Tiahuanaco, and that their habitat is considered to have formerly extended from that vicinity right down to the coast at Arica and the eastern margin of the open Polynesian ocean, cannot but be worth serious attention if a number of prominent Polynesianists, including a careful observer like Best, find it worth while to compare Ur of Sumeria with the Uru of Polynesian memories. Sumeria and Polynesia are just about antipodes, whereas Polynesia is at the doorstep of Peru, and at the time of its primeval discovery was daily washed by wind and water from a locally important Uru, one that matches Polynesian memories better than Ur of Sumeria not only in mythology and locality, but also in chronology.[1]

[1] Besides Uru, Best (*Ibid.*) mentioned another "highly interesting" name associated with the origin of the Maori, namely *Irihia*. Like many others he suspects Irihia to be a Polynesian reference to 'India', the 'nd' being alien to Maori tongue and thus distorted to 'rih'. It does not seem convincing to me that stray boat-loads of Polynesian voyagers should carry along Ur and India as two comparable names picked up on a voyage around the world. Let

Chucara—Tutara

Tiahuanaco is a name of late origin applied to the present ruined site (see further Part X), and was not the original name either of the cult-site or of its empire. The early Jesuit, Anello Oliva (1631), who came to Peru about 1597, wrote of his visit to Tiahuanaco: "And we passed to the area of Tyyay Vanacu [Tia Huanaco] to look at its edifices, which in ancient times were called Chucara, the antiquity of which no one can determine."

Gonzales de la Rosa also (1910, p. 411) wrote about the same pre-Inca site: "In exchange then, we know that the town does not have a Quechua name, inasmuch as it is called *Chucara*, which means House of the Sun, according to the Urus, as *Bertonio* says, instead of the Quechua Intiphuasi. We know furthermore that the Urus are the aboriginals inhabiting the islands of Titicaca, who more than probably were dependent on Tiahuanaco, and spoke the same language, which has not much to do with Quechua, since it resembles more the languages of the eastern forests."

Now, Chucara would in Polynesian pronunciation become Kukara or Tutara, and, Makea-Tutara is a well known mythical name in Polynesian religious parables and allegories, where the prefix Makea is known as a separate name of ancestral gods originated by "Light" in prehuman times. Thus in his *Maori Lore* Izett (1904, p. 43) says about Maui, whose full name is Maui-tiki-tiki: "...he is alleged to have been the actual leader of the Maori people in their original entry into the Pacific ... The people of New Zealand and the Hervey Group are the chief repositories of the legends of Maui, who was the son of Makeatutara by Taranga, his birth being miraculous."

Having regard to the common Polynesian passion for embodying sacred knowledge of historic events in allegory, we may note that, as stated above, the "mother" of the legendary Polynesian discoverer was Taranga, the "father" being a particular Makea surnamed Tutara. With the two names Taranga and Tutara reappearing in early Tiahuanaco respectively as Taranga (a local aboriginal tribe) and Chucara (the early name of Tici's home), it would be natural to interpret the allusion to Maui-tiki-tiki's miraculous birth as a reference to an intermixture of the white men from Chucara and women of the surrounding Taranga tribe.

Hilo—Hilo

The distance from Chucara, alias Tiahuanaco, down to the Pacific seashore is not impressive when we consider that the Spaniards, immediately upon their arrival, repeatedly covered the distance in both directions; and, as stated, the Tiahuanaco Empire spread its influence right down to the ocean and along extensive stretches of the coast. There is only

us note instead, as does Means (1920 a, p. 27), that the name *Iraya* is preserved in the myths of central Peru, where it appears directly as an old name or title for Viracocha, *alias* Tici.

On the other hand Irihia is in Polynesian dialects identical with Ilihia (r = l), and whatever may be the source connection, and there probably is one, Ilihia is the natural Polynesian pronounciation of the Quechua name *Illa* (pronounced Illia or Ilhia), which, as we have seen, has survived in Quechua Peru as an alternative prefix to the name of Tici. (As is well known, the Spanish 'll' in Illa cannot be rendered in English much more closely than the 'lli' in 'million'.) The meaning of Illa (or Ilhia) in Peru was 'Light'. We have also just seen that the Tahitians state expressly that Tiki's home-land was "the world of *light*." That the same metaphoric term was once used as a religious phrase, referring not only to Tici but also to his own heliacal abode and early Andean realm, seems more than possible, in view of Peruvian and Polynesian modes in the use of personal and geographical names and allusions.

one really good seaport on the unsheltered South Peruvian coast immediately below Tiahuanaco; this is Ilo, or Hilo, connected with ancient Tiahuanaco by good mountain tracks. The early Spaniards spelt this aboriginal Peruvian name as Ilo, without H, since the letter *h* represents a very harshly aspirated consonant in Spanish. Later, however, when the Englishmen arrived, Frezier (1717, p. 170) spent some time in this early seaport mapping the harbour and its vicinity, and he spelt the name of the port, as well as the immediately surrounding locality, with the river, as Hilo. If Polynesia's most celebrated legendary discoverer, the mythical "island-fisher" Maui-tiki-tiki, son of Taranga by Makea-Tutara and neighbour of the Urus, had any base in the Tiahuanaco Empire, then Hilo would be the direct doorway to his former home site.

We may again return to Polynesia, and quote Fornander (1878, Vol. I, p. 199): "The *Maui* legends, the *Maui* family of four brothers, and their parent *A-Kalana*, *Karana*, or *Taranga*, . . .are found upon all those groups in slightly different versions. The legend of *Maui-kiikii* or *Maui-tiki-tiki*, the youngest of the family, being out fishing, and catching the various Hawaiian islands on his hook, attempting to drag them ashore at *Hilo* and join them to Hawaii, is found nearly literally the same on New Zealand. On Tonga the same legend obtained, but they ascribe the act to *Tangaloa* instead of *Maui*."

In Hawaii, Hilo is a principal port on the east coast of the main island, but the pan-Polynesian discoverer and fisherman would not drag the various Hawaiian islands ashore on Hawaii, which also formed part of his catch. We must therefore assume that the present Hilo in Hawaii has merely been renamed, in typical Polynesian fashion, after another and primeval Hilo in Maui-tiki-tiki's aboriginal abode outside Polynesia, just as one of the Hawaiian islands, Maui, has been named after Maui himself. We have seen that such a Hilo is found as a port on the Pacific coast of Peru just below Tiahuanaco.

Mauri, Tambo-Mauri—Maui, Mauri

We now come to the personal name, Maui, of that special Tiki who plays such an important part in the allegories referring to the discoveries of Polynesia. An island in Hawaii is named in his honour, the North Island of New Zealand is by the Maori called Te Ika-a-Maui ("Maui's Fish"), and in far-flung Polynesian localities he is remembered as a hero connected with the pulling up of the first islands out of darkness and the unknown. Buck (1949, p. 5) writes: "The Maui myth of fishing up islands is widely spread throughout Polynesia. It is probable that Maui was an early navigator and explorer who lived so far back that he formed a link between the supernatural and the natural, between the gods and man. The fishing up of islands is a Polynesian figure of speech, for the discoverer of an island did fish it up out of the ocean of the unknown. The story, combined with other Maui feats, became popular and it was spread by later voyagers to regions Maui never knew."

Fornander (1878) has pointed out that the universality of the legend, "and the fact that each group has endeavoured to localise the god and his exploits on its own domain" prove that "its origin and the name of the hero must be looked for in their former habitants in the West". So far, however, an analogous name has not been discovered in the west.[1]

[1] Except by those who proceed west even of Ur of Sumeria and make associations directly with the Mauris of North Africa.

It is noteworthy in this connection that early Polynesian navigators, when setting out on an ocean voyage, took with them, in their canoes, a stone or some other sort of talisman which they referred to as a *Mauri*. (Best, 1925 a, p. 148.) A connection between this Mauri and the first successful ocean voyager Maui cannot be proved, but is etymologically very possible. Stair (1896, p. 40) shows that Mauri is a term used in Samoa for the spiritual portion of a man, and Mauri-uri is an ancestral spirit in the modern Marquesas Group. (Heyerdahl 1938, p. 150.)

Since the Tiahuanaco cult site has long been abandoned by its occupants, we have to study local names for places and individuals through their successors in the Andes. Thus it is not so surprising that an obviously personal name like Maui was less likely to survive in later Aymara and Quechua traditions than the name of an ancient cult site and port (Chucara and Hilo), or of ancient tribes and people (Taranga and Uru), or of a mythical local creator and his hierarchy (Tici). Yet, although the early dwellers of the Tiahuanaco district left no written records behind, they named villages, rivers, and mountains near Tiahuanaco with their own favourite names, many of which have survived till the present day. Recalling how Tici "created" and named his people by making them emerge from caves and rivers in the neighbourhood, it may be of some significance to note that Mauri and Tambo-Mauri are two village sites on the way from Tiahuanaco to the Pacific Ocean, while Mauri is also the name of the principal tributary of the Rio Desaguadero, flowing from the Pacific sierras through former Uru lands just south of Tiahuanaco.

Maui-ti'i-ti'i and Tici both solar representatives among their subjects

With this striking convergence in one restricted area around Tiahuanaco of the principal names intimately connected with the legendary discovery of Polynesia, we may well suspect that there is some source connection with that Tici family, the legendary emigrants from Tiahuanaco, who, according to surviving memories of the adjoining Inca Empire, departed into the open Pacific in early pre-Inca time.

For a further identification of the Polynesian discoverer with the emigrant Tiahuanaco Sun-priest or solar hierarch Tici-the-Light, we may note that the Society islanders give Maui's name as *Maui-ti'i-ti'i-o-te-ra* or "Maui-tiki-tiki-of-the-sun", and that of Maui's father as *Hihi-ra*, or "Ray-of-the-sun". (Luomala 1940, p. 36.) We have already seen with Ellis that the royal families of Tahiti also claim direct descent from the sun through the first man-god *Ti'i* (Tiki), who was son or grandson of this heavenly luminary. It seems obvious that the universal references to Tiki's name and existence throughout Polynesia are a good criterion of his former existence as an actual personality, rather than a fictitious being. They prove at least that his name and worship were common to some of the Polynesian ancestry before they spread over their respective islands. Tiki is not remembered in Indonesia or other parts of the far West Pacific, either as name or title, and still less as the creator and descendant of the sun, the first of all recorded kings, and chief migrant into the East Pacific adjacent to Polynesian waters. But in early Peru he is remembered from pre-Inca days with all of these characteristics, and over a widespread continental area, from his home among Taranga, Uru, and Mauri tribes near Lake Titicaca to his final

departure from the coast at Puerto Viejo below the equator. We are either confronted with East Pacific memories of one individual hierarch named Tiki, or remnants of a whole ecclesiastical lineage of that name. In any case the concurrence of the names and qualities associated with the legendary hero who emigrated from Peru with his light-skinned followers, and those with the same fair complexion who discovered Polynesia, is not to be explained by mere coincidence, nor as a parallel linguistic evolution due to the like tendencies of the human mind.

Large-ears left Peru and Long-ears reached Easter Island

No more is it a coincidence that people in wide areas of aboriginal Peru began to enlarge their ears to an enormous size upon the order of this same pre-Inca cult-leader, whilst the first legendary king of Easter Island brought just such long-eared people with him from the east. We are not restricted to the Easter Island traditions and stone monuments for verification of the claim that this practice existed locally, for the custom apparently survived with the women and children who were said to have been spared upon the destruction of the earlier "long-ears". Thus Behrens (1737, p. 136), who accompanied Roggeween when he discovered this island, wrote that there were among the Easter Islanders "a few of a reddish tint as if somewhat severely tanned by the sun. Their ears were so long that they hung down as far as to the shoulders."

And when Beechey (1831, p. 38) made his call, he recorded that: "Both sexes still retain the hideous practice of perforating the lobes of the ears, though the custom is not so general with the men as formerly. The aperture, when distended, which is done by a leaf rolled up and forced through it, is about an inch and a quarter in diameter. The lobe, deprived of its ear-ring, hangs dangling against the neck, and has a very disagreeable appearance, particularly when wet. It is sometimes so long as to be greatly in the way; to obviate which, they pass the lobe over the upper part of the ear, or more rarely, fasten one lobe to the other, at the back of the head."

The custom of lengthening the ears had spread with the Pacific immigrants and survived on some of the other islands, including the Marquesas Group. In Uapou Island of this group, Tiki was worshipped under the specific name of *Tiki Puaikanui*, that is: "Tiki with large ears." (Tautain 1897, p. 674.) Likewise, as Allen (1884, p. 250) points out: "Cook found the Hervey Islanders (north of Rarotonga) to have long beards and enlarged ears; they had a god 'Big Ears'."

The custom of ear-stretching is found in many parts of the world, among certain African tribes, among the Dajaks, and in early Nias, and its occurrence in Polynesia and sections of adjoining Melanesia is therefore in itself no argument for a necessary origin of the custom among the long-ears of Peru. However, when the Easter Islanders in the extreme east of Oceania declare that the custom was not of local origin since 'long-ears' were found in Hotu Matua's party from the desert land to the east, and when the Peruvians on the western shores of South America affirm no less confidently that Tici, the teacher and chief of all pre-Inca 'long-ears', emigrated westwards by sea with his followers, we have reason to suspect some underlying connection.

Sarmiento's account of Ticci Viracocha and his departure

As we proceed in our review of South American traditions and beliefs, we have allowed ourselves this little digression back to the islands merely to show that Polynesia is not completely alien to the subject on hand.

Returning to ancient Peruvian traditions from pre-Inca times, we find the main features of Betanzos' narrative borne out by other early chroniclers. Sarmiento de Gamboa (1572, p. 32), who took great interest in the various accounts given by the trained Inca quipucamayocs and historians, and who consulted the foremost of them before publishing his *History of the Incas*, gave much the same account as Betanzos.

Sarmiento tells us how the Incas believed that, after the creation, Ticci Viracocha sent a great flood to punish the sins of the first men, but the ancestors of the Cuzcos and some other nations were saved and so left some descendants. When the flood was over, Viracocha suddenly appeared on the Titicaca plateau with his servants, to help restore mankind and give them light.

"With this object he went, with his servants, to a great lake in the Collao, in which there is an island called Titicaca, the meaning being 'the rock of lead', of which we shall treat in the first part. Viracocha went to this island, and presently ordered that the sun, moon, and stars should come forth, and be set in the heavens to give light to the world, and it was so. . . . This done, Viracocha made a sacred idol in that place, as a place for worship and as a sign of what he had there created. Leaving the island, he passed by the lake to the mainland, taking with him the two servants who survived. He went to a place now called Tiahuanacu in the province of Collasuyu, and in this place he sculptured and designed on a great piece of stone all the nations that he intended to create. This done, he ordered his two servants to charge their memories with the names of all tribes that he had depicted, and of the valleys and provinces where they were to come forth, which were those of the whole land. He ordered that each one should go by a different road, naming the tribes, and order them all to go forth and people the country. His servants, obeying the command of Viracocha, set out on their journey and work. One went by the mountain range or chain which they call the heights over the plains of the South Sea. The other went by the heights which overlook the wonderful mountain ranges which we call the Andes, situated to the east of the said sea. By these roads they went, saying with a loud voice 'Oh you tribes and nations, hear and obey the order of Ticci Viracocha Pachayachachi, which commands you to go forth, and multiply and settle the land.' Viracocha himself did the same along the road between those taken by his two servants, naming all the tribes and places by which he passed."

Sarmiento also shows how tradition placed the erection of Tiahuanaco prior to the final departure of the viracochas: "...previous to starting, they built those edifices, the ruins of which may still be seen, before they set out. This was for the residence of Viracocha, their maker."

The quipucamayocs, describing to Sarmiento the appearance of Viracocha when he preached among their ancestors, gave much the same account as Betanzos' informants: "...all agree that Viracocha was the creator of these people. They have the tradition that he was a man of medium height, white and dressed in a white robe like an alb secured

round the waist, and that he carried a staff and a book in his hands." Regular books, as known from pre-Columbian Mexico, have never been discovered in Peru, yet an unidentifiable object, the memory of which the sight of a "book" or a "breviary" might well recall to a native mind, appears carved in the hands of the pre-Incaic Tiahuanaco stone statue reproduced on Plate XLV **2**.

To return to Sarmiento's account, this light-skinned teacher left his former residence at Tiahuanaco, walking northwards through the cordilleras between the roads taken respectively by his two disciples: "... Viracocha continued his journey, working his miracles and instructing his created beings. In this way he reached the territory on the equinoctial line, where are now Puerto Viejo and Manta. Here he was joined by his servants. Intending to leave the land of Peru, he made a speech to those he had created, apprising them of the things that would happen. He told them that people would come, who would say that they were Viracocha their creator, and that they were not to believe them; but that in the time to come he would send his messengers who would protect and teach them. Having said this he went to sea with his two servants, and went travelling over the water as if it was land, without sinking. For they appeared like foam over the water and the people, therefore, gave them the name of Viracocha, which is the same as to say the grease or foam of the sea."

The white Viracocha-runa, or Sea-Foam-people

This whole tradition, including the Quechua significance and origin of the term *viracocha* for the former "white" islanders of Titicaca, was, as finally presented, supported and verified by forty-two of the most prominent and best informed historians of the Inca Empire, a procedure which was protocolled by Spanish authorities under the auspices of the Peruvian viceroy. Nevertheless, the composition of the purely Quechua word *viracocha* has in after year encouraged some weird speculations, with theories even of Sanskrit (Desjardins 1858) and Egyptian (Campbell 1875) affiliations. The significance of the term *viracocha* has otherwise been fully discussed by Brinton (1882) and Villar (1887). Quoting the historian Herrera, Brinton (1882, p. 190) says of Viracocha:

"He passed on towards the West until he reached the shore of the sea. There he spread out his mantle, and seating himself upon it, sailed away and was never seen again. For this reason, adds the chronicler, 'the name was given to him, *Viracocha*, which means Foam of the Sea, though afterwards it changed in signification.' This leads to the etymology of the name. It is confessedly obscure. The translation which Herrera gives is that generally offered by the Spanish writers, but it is not literal. The word *uira* means fat, and *cocha*, lake, sea, or other large body of water; therefore, as the genitive must be prefixed in the Qquichua tongue, the translation must be 'Lake or Sea of Fat.' This was shown by Garcilasso de la Vega, in his *Royal Commentaries*, and as he could see no sense or propriety in applying such a term as 'Lake of Grease' to the Supreme Divinity, he rejected this derivation, and contented himself by saying that the meaning of the name was totally unknown. In this Mr. Clements R. Markham, who is an authority on Peruvian matters, coincides, though acknowledging that no other meaning suggests itself. I shall not say anything about the derivations of this name from Sanskrit, or the ancient Egyptian; these are etymological amusements with which serious studies have nothing to do."

"The first and accepted derivation has been ably and to my mind successfully defended by probably the most accomplished Qquichua scholar of our age, Señor Gavino Pacheco Zegarra, who, in the introduction to his most excellent edition of the Drama of *Ollantai*, maintains that Viracocha, literally 'Lake of Fat', was a simile applied to the frothing foaming sea, and adds that as a personal name in this signification it is in entire conformity with the genius of the Qquichua tongue.

"To quote his words: — 'the tradition was that Viracocha's face was extremely white and bearded. From this his name was derived, which means, taken literally, 'Lake of Fat;' by extension, however, the word means 'Sea Foam,' as in the Qquichua language the foam is called *fat*, no doubt on account of its whiteness.' "

The tribal name 'Sea Foam' is not at all improbable as applied to a seafaring people, at least not among aboriginals in Pacific America. We need only return to the very light-skinned aborigines of the Northwest Coast tribes, to find, as Barbeau (1945, pp. 427, 428) does, that the leading local seafaring tribe was called the "Foam-people". We even learn of the roming Foam tribe that their slogan was "Our war canoe crosses the ocean", and that, according to Northwest Coast tradition: "The garments of the Foam people were much finer and more luxurious, their canoes were more complex and seaworthy, and their customs belonged to a higher culture."

We should not therefore be surprised to find that also in South America the name *Viracocha-runa*, or "Sea-Foam-people", is applied to a light-skinned people who chose an island home in the huge mountain lake of Titicaca as their first settled abode among the pre-Incas, and the balsa raft centre of Manta and Puerto Viejo for their final departure into the waves of the Pacific. Nothing would be more natural to a "red" Indian, when sighting low aboriginal craft containing mariners of lighter skin than usual in his own tribe, than to give them the tribal name "Foam-people" or "Sea Foam".

The return of an unfaithful Viracocha servant

Sarmiento's informants told him also of a less significant but dramatic episode which followed after the departure into the ocean of the chief-god Viracocha and his disciples. Ticci Viracocha, in his farewell speech before he left the coast, warned his hearers that people would come with a false Viracocha, preaching that he was their Creator, but that they were not to be believed; one day, however, he himself would send messengers back to teach and protect the people of his deserted Empire. According to Inca tradition, his warning did very soon come true, but the fake was detected by the Indians. The background for this strange episode was as follows:

While the true Viracocha still reigned at Titicaca, he had dismissed one of his own servants for disobedience, and sent him floating on a raft down the Desaguadero river connecting Lake Titicaca with Lake Poopo. The dismissed viracocha had angrily threatened that he would one day return and take vengeance on his master. Only a few years after the departure of the true Viracocha and his followers from Puerto Viejo, the same man returned and, supported by others, began to preach that he was Viracocha. Although at first the people were doubtful, they finally saw that the claim was false, and ridiculed them.

"This absurd fable of their creation is held by these barbarians and they affirm and

believe it as if they had really seen it to happen and come to pass." With these words Sarmiento concludes his account of the prehistoric "white" men, who were alleged to have preceded himself and the other Spaniards in imposing culture and religion upon the red-skinned "barbarians" of early Peru. Markham (1907, p. 37), in his translation of Sarmiento, adds: "The tradition of the exercise of his creative powers by Viracocha at Lake Titicaca is derived from the more ancient people who were the builders of Tiahuanacu. Besides Sarmiento, the authors who give this Titicaca myth are Garcilasso de la Vega, Cieza de Leon, Molina, Betanzos, Yamqui Pachacuti, Polo de Ondegardo, and the anonymous Jesuit."

Pachacuti's account of the bearded Creator and his Tiahuanaco sons who left for the sea

Pachacuti-Yamqui Salcamayhua (1620, pp. 70, 73), himself a beardless Quechua Indian writer, and author of *An Account of the Antiquities of Peru*, specifically called attention to the fact that an immigrant creator with a *beard* had been active among his forefathers before the advent of the Spaniards. He relates that at a very remote period, shortly after Peru had been populated, there came from Titicaca Island to the tribes of the mainland an old man with a beard, dressed in a long robe. He went about in the highlands preaching his religious beliefs to the Indians. They called him Tonapa or Tarapaca ("eagle"), but also Uiracocha-ra-pacha yachi-pachan or Pacha-ccan, and various other names. He was first remembered as he came from Titicaca Island to Tiahuanaco, but later his activities took him all the way north through the Cordilleras until he came to Chacamarca (otherwise given as Cajamarca, in the highlands above the Pacific coast, in the extreme north of Peru). Finally: "Tonapa then followed the course of the river Chacamarca until he came to the sea."

Tonapa, alias Uiracocha-ra-pacha, is here given the very same itinerary as previously given by Betanzos, who also brought Viracocha by way of Cajamarca to the coast. Pachacuti added that Tonapa finally left by sea, according to the most ancient Inca accounts, and suggest of his own accord that he might possibly have headed for the Straits (Panama) and the other sea.

Pachacuti does not seem to consider the bearded preacher Tonapa, alias Uiracocha-ra-pacha, as more than a human culture-hero, distinct from the original divine creator himself, although to him also the two seem at times to be somewhat intermingled. He tells us elsewhere (p. 7) that the 'creator' had two 'sons', Ymaymana Viracocha and Tocapo Viracocha, who resided with him "at Tiahuanaco, where all mankind was created". In the end the creator had ordered the elder son, Ymaymana Viracocha, to set out from Tiahuanaco and go by the way of the mountains and forests to instruct and teach all the peoples living there. The younger son, Tocapo Viracocha, was also sent northwards, but by way of the Pacific plains, visiting the people there and instructing them. Thus they went northwards until they reached the sea, whence they disappeared from mankind for ever, the Indians believing they had returned to heaven. The reference to these two viracocha brothers is plainly a distorted version of the legend of the two selected viracocha servants met with in the earlier accounts of Betanzos and Sarmiento.

Aboriginal history; a foreign language and a foreign mind

We learn from various narratives that the "preaching", "teaching", and "instructions" of Viracocha were of a religious as well as of a practical nature. He was anxious that the Indians should consider him the representative of the sun, a divine being in spite of his human appearance, which only differed from theirs in a lighter skin and a beard, and in his attire, consisting of a long robe secured with a girdle, and the habit of carrying a staff and a book-like object in his hands.

It is interesting to note from various accounts how anxious this legendary preacher was to teach the tribes that he and his followers were god-men, connected with the sun, and that they should be worshipped and obeyed accordingly as creators, lords and protectors, instead of the idols of the former age of darkness. We are told how they taught the natives agriculture and showed them which were edible plants; how they introduced irrigation of waste land; how they built stone statues either in memory of their own ancestry who survived the flood (at Pukara), or thus to "create ancestors" for the already existing tribes (at Tiahuanaco); how they instructed their subordinates in megalithic work and other stone sculpturing; and how they made them believe in the magical power of having ears that reached to the shoulders.

We cannot look at the colossal monoliths and other cyclopean constructions left by the founders of Tiahuanaco and not realize that the Tiahuanaco dynasty was bound to survive *to some extent* in the memories of subsequent generations. Since there are no traditions of the Tiahuanaco cult and the main events of pre-Inca Peru other than those which include references to the white and bearded teachers, we should pay due attention to these stories among the local "barbarians" and try to understand them. It should be remembered that their religious beliefs were different from ours, and that their interpretation of observed facts would differ accordingly. The same could be said about their modes of expression and narration. But this does not lessen the value of what the Inca historians had to say. After all, the Inca traditions are centred round memories of prehistoric creatures with no more incredible characteristics than that they had a fair skin and a growth of beard, like our own Caucasian race. What they claim to have seen among themselves is no more fantastic in appearance than are the men with red hair, white skin, flowing beards, and long ear-lobes described by the early European discoverers on the nearest islands in the Pacific, whither the Inca historians agreed that all their sea-faring viracochas had finally retreated.

Some of the pre-Inca architectural achievements are of such proportions that they have astounded modern observers, and occasionally stimulated the weirdest theories among writers of our own day. Indeed, we can well believe that Tiahuanaco culture-bearers in action, dragging to their site from the nearest quarry miles away immense stone blocks, "some of which are twenty-five feet long, fourteen feet broad and nearly seven feet thick" (Mozans 1911, p. 190), would be a sight likely to make a vast impression, amounting to worship, and implant itself deeply in the memory of the primitive surrounding tribes.

The weight of single slabs among the largest of these carved and transported stone colossi is estimated by modern archaeologists at a hundred tons (Bennett 1946, p. 112), equal to the weight of twenty elephants. Such stupendous achievements cannot but have

created veneration and superstition among people like the Aymara and Quechua Indians, even though their ancestors had seen how the culture-leaders accomplished the task simply by the skilfully organized toil of the subjugated masses. To them the hierarch of such an unusual high-culture, who had been able to convert the huge hill at Tiahuanaco into a vast stone-dressed pyramid like Akapana, must have been a god, and perhaps even their own divine creator. This semi-artificial pyramid of Tiahuanaco rises above the plain and is visible to Indians at great distances on the plateau, being more than six hundred feet square, fifty feet high, and with a summit platform of roughly three hundred thousand square feet. No less impressive are the artificial and semi-artificial adobe pyramids near the Pacific coast in north Peru, dating back to the pre-Inca (Early Chimu) times when the Viracocha was remembered as descending from Cajamarca to the coast just in this neighbourhood.

The fact that the men of this time were able to build semi-artificial pyramids as big as hills, and construct irrigational works which made water flow into desert valleys, was bound to make a lasting impression on the superstitious tribes of the country.

We may well understand that the mediaeval Spaniards would think that any worship and religious belief other than their own should be the work of the devil and of barbarous ignorance. But modern science tries to interprete rather than to condemn or ignore widespread native beliefs and legends. The Spaniards may also be excused for believing that a beard and a light skin should be post-European rather than pre-Incaic on the far side of the Atlantic, and that American history began when Columbus set foot ashore in the West Indies; but in our time we know that local evolution or foreign interbreeding had left men with light skin, beard, and even occasional reddish hair on the Pacific coast of Northwest America *before* the arrival of European ships. We know too that other men of even lighter skin, with strong beards and fair hair, made occasional visits to the opposite side of North America some twenty Quechua generations before the coming of the Spaniards to Peru. These were led by Leiv Eiríksson and his kin, who landed in Northeast America and then returned, to survive in *European* tradition until his adventures were put on written record.

American history began twenty thousand years or more before the advent of the first Spaniards or the first Vikings. In the latter epoch of this span of time, in the centuries before Columbus, great civilizations have risen and even the greatest fallen. Prolonged local isolation, or intermixture with secondary immigrants of different origin, can account for the fact that pre-Columbian America was not inhabited by "red" or copper-coloured men only, but, as stressed by Boas (1925, p. 22), and by many others with him, that the American Indian type is not by any means uniform: "The pigmentation differs from a dark brown to almost European lightness . . . the hair is not always straight and black, but may be brownish and wavy."

We need not, therefore, cross the Atlantic or any other ocean to find pre-Columbian men who would live in Inca memories as the "Sea Foam People" or white and bearded gods. Without suggesting any direct coast to coast contact, we need go no further than to the Northwest Indians to find another American area where a "Foam people" is remembered, not, in this area, as making a short visit, but as mariners who came to stay, and where the European discoverers also found aboriginal men with skins "very little darker than Europeans in general" and with "large and thick, but straight beards". (See Part II.)

Thus we have, within pre-Columbian America, all we need to appreciate the physical appearance, religious conceptions, and creative abilities of the viracochas in Inca mythology and legendary history.

Cieza's account of the white benevolent Ticciviracocha

Cieza de Leon, it will be recalled, collected the aboriginal traditions that men, white and bearded like the Spaniards themselves, had lived in Vinaque and on Titicaca Island long before the reign of the first Inca. We further find that he also was impressed by the Inca memories of Viracocha. Cieza says (1553-60, Part II, Chap. V) that, "before the rule of the Incas in these realms, and even before they were known, these Indians relate other things much older than all that has been told." Cieza's informants told him that in the earliest days, when there were only heathen idolaters in their land, the sun had first appeared among the Indians of Titicaca Island. On this occasion the sun must have created the god-like culture-bearers who now suddenly appeared as teachers among the barbarians of Peru, or else *vice versa*, for we learn through Cieza:

"And immediately after this event, they tell that from the south [of Cuzco] there came and stayed a white man of tall stature, who, in his appearance and person showed great authority and veneration, and that as they saw he had great power, turning hills into plains and plains into hills, making fountains in the solid rocks, they recognized such power in him that they called him Creator of all made things, Beginning thereof, Father of the Sun, because, besides this, they say that he made greater things, as he is said to have given men and animals their existence, and finally that wonderful benefits came from his hands. And the Indians who told me this had heard from their forbears, who had also heard it from the songs which these had had since very ancient times, that he went off northwards along the Sierras while accomplishing these wonders, and that they never saw him again. In many places they tell how he gave rules to men how they should live, and that he spoke lovingly to them with much kindness, admonishing them they should be good to each other and not do any harm or injury, but that instead they should love each other and show charity. In most places they generally call him Ticciviracocha, but in the province of Collao they call him Tuapaca, and in other places around there Arunaua. In many parts temples were built to him, in which they placed stone statues in his likeness, in front of which they made sacrifices. The large stone statues which are at the site of Tiahuanaco must be from those times. And although they relate of his former fame this which I tell of Ticciviracocha, they cannot tell more of him, neither that he returned to any part of his kingdom."

Departure by sea of Ticci surnamed Viracocha

Cieza also states: "It is furthermore said that some time later another man was seen who resembled the one described, but whose name is not mentioned." This is evidently a reference to the dismissed "white servant" of Viracocha, who came back to preach when the others had left.

The natives had heard from their forefathers that Viracocha was much beloved, because he was humane and benevolent to all, and because he cured sick people, but that when he

came to the neighbourhood of Cacha the Cana-people assembled to kill him. As they approached the place where he was, they saw him kneeling with his hands stretched out towards the mountains, as if praying for divine help. Here Cieza repeats almost verbally the account of the fire which scared the Cana Indians, as already related by Betanzos, and concludes: "It is furthermore said that after he left this territory, he continued to the coast of the ocean, where he spread out his mantle and disappeared for ever among the waves. And according to the manner in which he left, he was given the name Huiracocha, that is to say Sea foam."

It is unlikely that Indians spread over a wide area would evolve conceptions of such an alien humanitarian had the idea not actually obtruded itself upon them in concrete human form. In addition, the somatological collections from the Tiahuanaco site and early pre-Inca Peru give us all the proof we need that the men behind the irrigation ditches and the megalithic sites were surgeons as well as architects. Nowhere among putatively "primitive" races did medical knowledge—with trepanning, setting of fractured bones, dentistry, and the use of exceedingly fine bandages—reach the level of these early culture-bearers. To this we shall return in a later part.

Avila's account of the Creator

Viracocha appears more human still in an early version rendered by Francisco de Avila (1608, p. 124). Here a viracocha, under the name Coniraya Uiracocha, is recalled simply as an intelligent old man associated with the construction of the irrigational terraces, walls, and channels: "They say that this was the Creator of all things; and that, by his word of command, he caused the terraces and fields to be formed on the steep sides of ravines, and the sustaining walls to rise up and support them. He also made the irrigating channels to flow, by merely hurling a hollow cane, such as we call a cane of Spain; and he went in various directions, arranging many things. His great knowledge enabled him to invent tricks and deceits touching the *huacas* and idols in the villages which he visited."

Avila adds that there was in Peru an idol called Coniraya which was invoked and reverenced under the name *Coniraya Uiracocha* almost down to the coming of the Spaniards. He is much puzzled to observe that "this name is that which they gave, and still give, to the Spaniards", but affirms: "This invocation and custom of calling the idol by the name of Uiracocha certainly prevailed long before there were any tidings of Spaniards in the country." Avila does not seem to realize that the Spaniards may have been named after the viracochas rather than vice versa.

Acosta's version of Viracocha at Tiahuanaco

Joseph de Acosta (1590 b, Vol. I, p. 71, English translation 1604) merely says of the Peruvians that their earliest memories fade back into a disastrous deluge, and that some time later "they report that out of the great Lake Titicaca came one Viracocha, which staied in Tiahuanaco, where at this day there is to be seene the ruines of ancient and very strange buildings, and from thence came to Cuzco, and so began mankinde to multiply."

Andagoya's account of the founder of Cuzco, white and bearded

Pascual de Andagoya (1541–1546, p. 55), whose explorations from Panama led to Pizarro's discovery of Peru, and who was in intimate contact with all the Spanish explorers and voyagers who took part in the subsequent Conquest, wrote: "The first lord, of whom there was any recollection in Cuzco, was the Inga Viracoche. This was a man who came to that land alone; but there is no record of whence he came, except that Viracoche, in the language of the people, means 'Foam of the sea.' He was a white and bearded man, like a Spaniard. The natives of Cuzco, seeing his great valour, took it for something divine, and received him as their chief. He ordained many excellent laws and regulations for the government of the land; built the edifices of Cuzco and the fortress, which is made in a wonderful manner."

The Viracochas and the Inca line

The title of 'Inga', prefixed above to the name of Viracocha, may be the result of the later Incas' attempt to establish their descent from these celebrated viracocha deities and thereby strengthen their own position as children of the sun. On the other hand Andagoya may not have distinguished between the original bearded culture-hero Viracocha, who came alone to Cuzco en route from Tiahuanaco to the sea, and a much later Inca Viracocha or Uira-ccocha Ynca, a ruler in the middle of the Inca dynasty who was given this honorary name probably because, like the later Spaniards, he resembled the original viracochas in having a growth of beard: "The prince is said to have had hair on his face, while the Indians are usually beardless," says the Inca historian Garcilasso de la Vega (1609 b, Part II, Chap. 45) of this late Inca Viracocha to whom he was himself related on his mother's side. He adds that the Spaniards were termed "Uira-ccocha" like this emperor, because they too wore beards, and because they, like Viracocha, wore clothes right to the feet, whereas the usual Indian custom was to be dressed only down to the knees.

Cieza (1553–60, Part II, Chap. 38) also at first mistook the references to the late Inca Viracocha for those pertaining to the original Ticciviracocha, and believed the said Inca to have come from other parts, until he was informed by the learned men at Cuzco that the *Inca* of that name "was born in Cuzco and grew up there like his parents and ancestors, the name Viracocha being applied to him only as a personal name of the kind everybody has."

Fernando Montesinos (1642, p. 52), partly using important source material from Blas Valeras, says that in imitation of the first and original Viracocha (Huira Cocha, or Huarma Huira Cocha), many early Peruvian gods and idols were named Viracocha, and also some royal children. But the early king Capac Raymi Amanta commanded that henceforth the name should be given only to "the great and ancient god whom his ancestors had been wont to adore". Subsequently only one of the most prominent Incas (*Ibid.*, p. 97) was permitted during manhood to adopt the name of the early creator Viracocha.

A search through the early Spanish literature concerning the origin of the Inca leaves no doubt that the latter endeavoured to connect their genealogy directly to that of the culture-hero Viracocha and the light-skinned bearded islanders, all of whom are associated with a primeval focusing centre on Titicaca Island in the lake of the same name. We know

of the Titicaca Island traditions[1] that the Inga-Ré, as 'mestizos' sprung of the 'caballeros' and the native island women, became the ancestors of the royal Inca line. And all through Inca accounts we find a deliberate effort to join the Inca ancestry to that of Viracocha and the Sun, often even to amalgamate the lines to the benefit of the Incas, who would thus themselves take the credit of being the originators of Andean civilization, and direct and unpolluted descendants from their father the Sun. That the Incas rose to power by playing on the primitive conceptions and superstition of the masses, and through sheer imitation of their forerunners, has been well known at least to the members of the Inca family themselves, and the fact seems even to have been suspected to some extent among the broad masses of the people.

Garcilasso's legend of savages suddenly given culture

Inca Garcilasso de la Vega, whose purpose it was to establish his mother's Inca family as a culture-people not inferior to that of Spain and as the true founder of civilization in South America, gives little credit to the earlier pre-Inca civilizations. But he openly admits that the Incas established their hierarchy through fraud and by exploiting the earlier Peruvian beliefs that the sun had first appeared among the natives on Titicaca Island. Since he does not mentiont he existence of any pre-Inca high-culture, but gives all the honour to his own rather recent Inca kin, we may safely deduce that his account of the introduction of civilization into aboriginal Peru can have historic value only if we treat his reference to the first *Inca* culture-spreaders as a reference to the first *Peruvian* culture-spreaders.

Garcilasso (1609 b, Part III, p. 62) had his information from Incas of royal blood, and he tells us himself how he acquired his account of the rise of the Incas: "So days, months, and years passed away, until I was sixteen or seventeen years old. At that time it happened that, one day when my relations were engaged in these discourses, talking of their royal ancestors, I said to the most aged of them, who usually related the stories of his family—'Ynca my uncle, you have no writings which preserve the memory of past events; but what accounts have you of the origin of our kings?...'"

"The Ynca, as soon as he had heard my questions, was delighted to have the opportunity of replying to them; and I, though I had heard his stories many times before, never listened with so much attention as on that occasion. He turned to me and said, 'Nephew, I will tell you what you ask with great pleasure, and you should preserve what I have to say in your heart', which is their phrase, instead of saying in the memory. 'Know then that in ancient times, all this region which you see was covered with forests and thickets, and the people lived like wild beasts without religion, or government, or town, or houses, without cultivating the land, or clothing their bodies, for they knew not how to weave cotton nor wool to make clothes. They lived two or three together in caves or clefts of the rocks, or in caverns underground. They ate the herbs of the field and roots or fruit like wild animals, and also human flesh. They covered their bodies with leaves and the bark of trees, or with the skins of animals. In fine they lived like deer or other game, and even in their intercourse with women they were like brutes; for they knew nothing of living with separate wives.'"

[1] As stated, the original occupants of Titicaca Island, both Quechua and Aymará, moved over to the main shore of Lake Titicaca for a few decades after the Spanish conquest, but the oral traditions and memories again followed the natives back to the island.

It seems rather obvious that such a vivid and descriptive memory of primitive life in the Andes could never have survived had these barbarous individuals themselves been the founders of Andean civilization through the slow and enduring process of cultural evolution. The mere existence of such a legend among the Inca goes to prove that we are dealing with the memories of cultured people who have seen savage life in the Andes as a contrast to their own. Yet we know that the first *Inca* did not find the people of the Andes without religion, government, agriculture, and architecture. These things were due to their highly cultured predecessors, the spreaders of Andean civilizations like early Tiahuanaco, Pucara, and Chavín. The spreaders of some of these pre-Inca cultures would most likely have found large stretches of the aboriginal Andes in the state described so carefully by the Incas, and the latter undoubtedly borrowed from them this original history, like part of their own culture.

The Inca imitators as solar deities

Inca Garcilasso, after describing Titicaca Island in the highland lake of the same name, says:

"The Yncas say that it was on this island that the Sun placed his two children, male and female, when he sent them down to instruct the barbarous people who then dwelt on the earth. To this fable they add another of more ancient origin. They say that, after the deluge, the rays of the Sun were seen on this island, and on the great lake, before they appeared in any other part. ... The first Ynca, Manco Ccapac, taking advantage of the ancient fable, and assisted by his own genius and sagacity, seeing that the Indians venerated the lake and the island as sacred things, composed a second fable; saying, that he and his wife were children of the Sun; and their father had placed them on that island, that they might thence pass through the country, teaching the people in the manner that has been fully related at the beginning of this history. The Yncas Amautas, who were the philosophers and learned men of the State, reduced the first fable to the second, teaching it as a prophecy, if one may use such a term. They said that the Sun having shed his first rays on that island, whence to illuminate the world, was a sign and promise that on the same spot he would place his own children; whence to go forth instructing the natives, and drawing them away from the savage condition in which they lived, as those kings actually did in after times. With these and similar fables, the Yncas made the Indians believe that they were children of the Sun; and they confirmed this belief by the numerous benefits they conferred upon the people."

Garcilasso received the above account from his Inca relatives, who strove to make their subjects believe that their own family ancestor, the first Inca Manco Ccapac, was the direct son and first disciple of the sun. But Garcilasso also has to put in a reference to Tiahuanaco. He admits that "the most current opinions touching the origin of the Inca kings" which were held by "most of the people of Peru, that is, the Indians from south of Cozco, what they call Collasuyu, and those in the west, called Cuntisuyu," present a slightly different version of the same event:

"In order to make it more authoritative through time (antiquity), they say it happened after the deluge, of which they know nothing beyond that it really took place ... Thus they say that after the waters of the deluge had subsided, a certain man appeared in the

country of Tiahuanacu, which is to the south of Cozco. This man was so powerful that he divided the world into four parts, and gave them to four men whom he honoured each with the title of king, the first of whom was called Manco Capac, the second Colla, the third Tocay, and the fourth Pinahua. To this they add that he gave the northern part to Manco Capac, that of the south to Colla (after whom that great province has ever since been called), to Tocay that in the east, and to Pinahua that of the west. They further assert that, after having thus favoured them, he sent each one to the land pertaining to him, to conquer and govern all the people there found."[1]

It is clear that the Incas did not favour this more widespread account, which deprived them of the claim that they themselves were direct descendants of the sun, and which made the emperor of Tiahuanaco the first and supreme human Lord of Peru, rather than their own progenitor Manco Capac.

The Inca, with all their power, had not quite managed to suppress the memory among the masses that an older and more powerful empire had existed in the Andes, with its seat at Tiahuanaco, prior to Manco Capac's march to establish the subsequent Inca capital in the old site at Cuzco.

Early chroniclers like Cieza de Leon, Juan de Betanzos, Sarmiento de Gamboa, Pachacuti-Yamqui Salcamayhua, Francisco de Avila, Joseph de Acosta, Anello Oliva, Pascual de Andagoya, Fernando Montesinos, and Garcilasso de la Vega have shown that there were memories in aboriginal Peru of important cultural, religious, and political events of pre-Inca times all centring about Lake Titicaca, and more specifically Titicaca Island and the megalithic site of Tiahuanaco. Both places are near the southern end of the same lake, and both have ecclesiastical ruins of superior workmanship of admittedly pre-Inca origin. Here Viracocha is remembered as having made his first appearance among the Indians, and here he built his first abode, from which he spread his culture and benefits all over Peru. Here too, the white and bearded men, the viracocha-runa or Sea-foam people were active during Viracocha's reign, until they were sent by their chief, on their final mission northwards, or killed in the local fighting. From this same area, with the same inland island, and, probably *in part* from the same blood, came the Inca, hardly as direct successors of the original Tiahuanacans, but more probably only after a considerable period of intermediate Andean kings or provincial chiefs.

Titicaca Island was the "birthplace" of the sun and of Viracocha, and it was the subsequent "birthplace" of the Inca. According to tradition, Viracocha proceeded to Tiahuanaco, which became his principal seat under his various personal names, until he left by way of Cuzco, Cajamarca, and the Pacific coast at Puerto Viejo. The subsequent solar representatives, the Incas, proceeded straight northwards to Cuzco, which became their principal seat from the legendary period of Manco Capac down to the time of Atahualpa and the arrival of the Spaniards.[2]

[1] Translation by Bandelier (1910, p. 309).

[2] The importance of the Titicaca basin in the legends and traditions of the Inca has been pointed out by many. La Barre (1948, p. 21) wrote: "The earliest history of the Lake Titicaca region is shrouded in legends. A most persistent tradition is that the first Inca, Manco Capac, and his sister-wife Mama Ocllo, came from the Island of Titicaca. . . . Another legend is that a white, bearded race advanced from the shores of Lake Titicaca, established their ascendency over the natives, and taught them all the elements of culture."

Zapalla Viracocha and Zapalla Inga, the "Only Chief", Gómara's version

Francisco Lopez de Gómara (1553) who never went to Peru himself, but who had direct information from the earliest Spaniards to visit the newly discovered Inca Empire, says of the Inca that: "Their origin was from Tiquicaca, which is a lagune in the Collao, forty leagues from Cuzco, the name of which signifies Island of Lead... The principal Inca who took away from Tiquicaca the first ones and led them, was called Zapalla, signifying only chief. Some aged Indians also say that he was called Viracocha, which is to say 'grease of the sea,' and that he brought his people by sea. They finally affirm that Zapalla peopled and settled Cuzco, whence the Incas began to make war upon the surroundings."[1]

Zárate's version

After Gómara, Augustin de Zárate (1555), who came to Peru as early as 1543 and had access to first hand information, presented a remarkably similar version: "... and there was no general lord of the whole land, until from the region of the Callao, from a great lagoon there is [in it], called Titicaca, which has eighty leagues in circumference, there came a very warlike people which they called ingas. These wore the hair short and had the ears perforated, with pieces of gold in the holes which enlarged the apertures. These called themselves [are called] ringrim, signifying ear. And the principal among them they called Zapalla inga, [the] only chief, although some mean to say that he was called inga Viracocha, which is 'froth or grease of the sea,' since, not knowing where the land lay whence he came, [they] believed him to have been formed out of that lagune."[2]

Anonymous chronicler

Bandelier (1910, p. 305) also cites a very early incomplete and anonymous document (*Conquista y Poblacion del Perú*), which is also mentioned by Prescott and apparently dates back to the early period of Spanish colonization in Peru. The text runs: "After this was done, these large-eared people [Orejones] say that the manner in which they got a chief among themselves was, that [from] a lagune which is thirty leagues from Cuzco, in the land of Collao, and [which] is called Titicaca, the principal of them, who called himself [was called] Viracocha, came forth, who was very shrewd and wise and said he was a child of the sun. And of this one they say that he gave them polity in dress and in building houses of stone, and he it was that built the Cuzco and made stone-houses and the fortress and house of the sun..."

Gutierrez' version

A somewhat similar account is presented by Pedro Gutierrez de Santa Clara (1603), who arrived in Peru before Cieza and remained even longer. He says (Pt. III, p. 421) that the oldest Indians told him that they had heard from their forefathers and their songs that six

[1] Translation by Bandelier (1910, p. 304).

[2] Translation by Bandelier (1910, p. 305).

hundred years before the Spaniards came the first Incas took over Peru in a period when only *curacas* or local chiefs reigned over the land, each in his own province. Gutierrez says further:

"The first Indian lord who began to enter foreign lands was called Mango Ynga Zapalla and this Indian initiated the wars. He went forth with armed people from a large island called Titicaca, which is in the midst of a lagune that is very large and quite deep, in the great province of *Atun Collao*. This Mango Ynga Zapalla succeeded in becoming a very renowned and preferred lord, more than all the small chiefs, curacas, that were around that lagune; on account of which he, by advice of the fiend and of the sorcerers, sought to occupy their lands in a thousand ways, modes and manners he could, and to place them under his lordship and command. And with this intention he went forth with many people from the Island, in many rafts made of canes and dry wood."[1]

Gutierrez states however, that this Mango Ynga Zapalla did not go to Cuzco, but settled near the lake, where he established "his seat and royal court" in the great Collao.

Personal name general title

It is, of course, a question whether Zapalla really was the name of an early Inca or only another name for Viracocha. The personal name of any native culture-hero should be treated with the utmost care, especially when we are dealing with people like the early Peruvians—and the Polynesians—among whom a name could be very loosely attached to one individual. One person might be named and renamed many times according to his appearance, activities, or mode of life, and what appears to us to be a personal name may very often be an honorary title and sacred allusion or a mere descriptive phrase. The present author has on three different occasions been renamed among the Polynesians; on the last of these he was as a specific honour given the full name of the principal former king on Raroia.

Since the Incas copied the Viracochas in sallying from Titicaca Island to the mainland as children of the sun, it would be natural for them to adopt their name, if only to assist the Inca dynasty in its attempt to be the "only chiefs". In fact, as just cited from Zárate, Zapalla means the "only", and is in all likelihood an honorary epithet used as much by Manco Capac as by Viracocha. Brinton (1882, p. 174) says: "Yet another epithet of Viracocha was Zapala. It conveys strongly and positively the monotheistic idea. It means 'The One,' or, more strongly, 'The Only One'."

It is clear that either Mango Ynga Zapalla must be identical with—or there must be every reason for confusing him with—the first Inca Manco Capac. The former means "Mango, Only Ynga" or "Manco Only Inca," and the latter means "Manco, Great or Powerful." (Tschudi 1853, p. 148.)

The confusion caused by Viracocha's epithet Zapalla, when applied also to the first Inca "Manco", is apparent: Gómara states that the principal Inca was remembered simply as Zapalla, signifying Only Chief, and that he came with his men from Titicaca and settled Cuzco, whereas some aged Indians said he was called Viracocha and that he brought his people by sea. And Zárate similarly stated that the first ingas, known as *ringrim* or long-

[1] Translation by Bandelier (1910, p. 302).

ears, came from Titicaca to Cuzco under the leadership of Zapalla, the only chief, although some informants told him that this was the inga Viracocha. Finally, Gutierrez says that Zapalla never went to Cuzco, but settled in the great Collao near the lake and the islands, whence he brought his army on rafts.

Also Bandelier (1910, p. 333) points out that Zapalla is not a name but a *title*, and that the native word for "alone" or "the only one" is, in the Quechua and Aymará tongues respectively *Çapalla* and *Sapaktha*. He even points to the analogy in name, place of residence, and life story, between Zapalla and Zapana, the latter being a celebrated war-chief who reigned in the Collao long before the time of the first Inca; according to Cieza he lived in the time of one Cari and of the final massacre of the white and bearded people on Titicaca Island. (Cieza, Part I, Chap. C; Part II, Chap. IV.)

Further chroniclers: Pizarro

We possess yet further accounts showing the importance of Titicaca in the traditional history of the Incas. Pedro Pizarro (1571, p. 233), an eye-witness from the day of conquest, merely states: "These Indians say that an Inga was their first lord. Some say he came from the Island of Titicaca."

Molina's account of Tiahuanaco immigrants

Father Cristóval de Molina (1570—1584, p. 4) took again more interest in the local legends, which he had ample opportunity of collecting as priest in the Indian hospital at Cuzco. He was told of a flood in which most of humanity perished, but a few survivors arrived miraculously in Tia Huanaco. Further, that: "The Creator of all things commanded them to remain there as *Mitimas* [colonists or settlers]; and there, in Tiahuanaco, the Creator began to raise up the people and nations that are in that region, making one of each nation of clay, and painting the dresses that each one was to wear."

Molina (*Ibid.*, p. 5) also makes a reference to the ancient stone statues: "There are other nations which say that when the deluge came, all people were destroyed except a few who escaped on hills, in caves, or trees, and that these were very few, but that they began to multiply, and that, in memory of the first of their race who escaped in such places, they made idols of stone, giving the name of him who had thus escaped to each *huaca*." Further: "They say that the Creator was in Tiahuanaco, and that there was his chief abode, hence the superb edifices, worthy of admiration, in that place."

Inca ordained by human sun from Tiahuanaco

According to Molina, the Inca played no part in these early doings. They alleged that in this early period all was dark, until the Creator made the sun and the heavenly bodies at Tiahuanaco, and told them to go to Titicaca Island and thence rise to heaven. And, as soon as the sun, in the form of a man, was ascending to heaven, he called to Manco Capac as the oldest Inca, and told him to proceed from the island to subdue foreign tribes and to make himself the great lord of the many nations. He should look upon the sun as his father, and worship the sun.

Inca imitation in emergence from cave. Cobo's versions

The Jesuit and historian Bernabé Cobo, who came to Peru in 1599, found that the Indians of Peru disagreed considerably in their accounts of the supernatural origin of the Incas, although they agreed in making Titicaca Island their place of origin. Some maintained (Cobo 1653, Vol. III) that the Incas, clad in a very different dress from that worn by the local people, and with their ears perforated with weights of gold, simply proceeded under the leadership of Manco Capac from Lake Titicaca to Cuzco by way of a cave at Pacarictampu (or Pacari-tambo), a few leagues from Cuzco and in the same valley. Others believed that the Creator had led the Inca party from Titicaca through the caverns of the earth until they came forth through the sacred cave of Pacarictampu. Others, again, held that the Creator Ticciviracocha or Pachayachachic had created the sun as a resplendent man at Tiahuanaco (Tiaguanaco), and that he sent him to Titicaca Island, where he instructed Manco Capac before he rose into heaven, and that Manco Capac and his Inca brothers then sank into the earth and came out again at the cave of Pacarictampu. Yet others related that the Sun, seeing the miserable conditions on earth, sent his son and daughter to Lake Titicaca, whence they were told to set out as they pleased, instructing the people and teaching them the knowledge of the Sun, and persuading them to recognize his authority and yield him the adoration that was his due.

Cobo, like Garcilasso, relates at length the wellknown myth of how the sun presented to Manco Capac a golden rod or staff, with which he should strike the soil wherever he took rest. Where the rod sank into the ground, he should take up his abode. One cannot but feel that this procedure was just an ingenious way of enshrouding in a veil of sorcery and magic the very simple procedure of any agriculturist like the Inca, when searching soft and deep humus for a favourable new abode in the Andes.

Cobo finally says: "Another fable of the origin of the Incas is much similar to this, except that it affirms that the first ones were born on the above-mentioned island by a woman called Titicaca, for which reason they have chosen the name which the island in the lake has today."

Ramos' account of homicide of white Tonapa at Titicaca

Bandelier (1910, p. 327), in collecting aboriginal myths and traditions concerning Titicaca Island, mentions the rare publication of Fray Alonzo Ramos Gavilan (*History of Capacabana*, Lima, 1621). This also mentions a belief that Titicaca Island was Manco Capac's place of origin. Bandelier adds:

"Ramos also speaks of a mysterious white man called Tunupa and Taápac, murdered by the Indians on the Island. Mention is also made of the belief that, after several days of obscurity, the sun came out of the Sacred Rock. . . . the Tonapa tale as related by Ramos is almost identical with the statements on the same topics by Salcamayhua, another contemporary of his. It will be recollected that Tunapa was already alluded to by Cieza, but very few are the details he gives, in comparison with what is contained in the writings of Ramos and Salcamayhua. Between 1550 and the beginning of the seventeenth century only a few fragments of stories resembling the Tonapa or Tunapa tradition are as yet known.

Hence it is possibly a Colla or Aymará tale, heard by Ramos and Salcamayhua from Aymará Indians or (in case of the latter) from Quichuas confining with the Aymará stock."

Oliva's account of Manco Capac's arrival along the coast from the north

Another early chronicler, the Jesuit Anello Oliva (1631), came to Peru about 1597 and took up his headquarters down on the coast, in Lima. He also spent some time in the highlands on the shores of Lake Titicaca. In his *History of Peru* his aim seems to be not to translate and present the native traditions verbally, but to interpret their contents in accordance with his own suppositions and geographical outlook. The contents of his narrative must be judged accordingly.

Oliva's informants have left him with the impression that, after a deluge, some people moved down from the far north of South America (Oliva suggests Venezuela). Having gradually got as far south as the vicinity of Santa Elena (in the northern part of the former Inca Empire and in the southern part of the present Ecuador), the migrants settled for several generations. "Many made voyages along the coast and some were shipwrecked. At last one branch took up its abode on an island called Guayau, near the shores of Ecuador." On Guayau Island a certain Atau had died after first becoming the father of Manco Capac.

With this strange prelude to Manco Capac's life-story, Father Oliva proceeds to bring the culture-hero from the seashore and up to his reputed birthplace in the cave of Pacari Tampu: "On that island Manco Capac was born, and after the death of his father Atau he resolved to leave his native place for a more favoured clime. So he set out, in such craft as he had, with two hundred of his people, dividing them into three bands. Two of these were never heard of again, but he and his followers landed near Ica, on the Peruvian coast, and thence struggled up the mountains, reaching at last the shore of Lake Titicaca. There Manco separated from the others, leaving them with orders to divide after a certain time and to go in search of him, while he took the direction of Cuzco. He told his people, before leaving, when any of the natives should ask them their purpose and destination, to reply that they were in quest of the son of the Sun. After this he departed, reaching at last a cave near the Cuzco valley, where he rested."

When the time had elapsed, Manco Capac's companions started in search of him in several groups. Some crossed over to Titicaca Island, where they sunk the craft in which they had crossed the lake, and hid in a cavern on the island. A few days later, when they saw some local people approaching by water, they came out of the cave in the rock and said they were in quest of the son of the Sun. "This filled the others with profound respect for the newcomers; they worshipped them and made offerings to the rock, sacrificing children, llamas, and ducks. All together went back to the mainland, and shortly afterward learned that at Pacari Tampu the son of the Sun had come out of a cavern, called Capactocco, in great splendour, bedecked with gold, as brilliant in appearance as his father, and that with a sling he had hurled a stone with such force that the noise was heard for more than a league off, and the stone made in the rock a hole as large as a doorway. At this news all the people of those regions went to see the miraculous being. Manco Capac received them as subjects. On this artifice he began to base his authority and the subsequent sway of the Inca tribe."[1]

[1] Translation by Bandelier (1910, p. 325).

In another passage Father Oliva adds that, long before this, an all powerful lord had had his seat in Tiahuanaco, the oldest settlement in the land.

All the above-mentioned accounts of the Inca origins begin with the sudden appearance of Manco Capac as he marches forth with his followers in all his final glory from the cave of Pacari Tampu, or from the lakeside on the Titicaca plateau. Father Oliva's version differs essentially in its prelude, which brings the people up from the coast on a well-organized plan, so that they may approach the local people under cover, suddenly appearing in their midst as the children of the Sun. Such an ingenious scheme may very likely have been conceived by the Inca when first intruding upon the Cuzco Indians and establishing their dynasty as solar kings. Yet, Oliva's account of the coastal voyage and ascent from Ica, being unique among the early chronicles, cannot have the weight it might have had if corroborated by other early writers. But as he is unlikely to have invented the tradition himself, we must at least count with the possibility of his having heard some legend current in the lowlands of the arrival of some early culture-people from the coastal area to the north. We shall later return to the question of cultural diffusion between the various great centres of the pre-Inca high-cultures on the coast and in the highlands, when we turn from the field of native history to the more concrete testimony of archaeology.

Fair individuals behind the fraud of sun-descent

We cannot leave Oliva's account without adding Stevenson's version, which also brings Manco Capac secretly up from the coast before he revealed himself to the mountain Indians. Stevenson, like Oliva long before his time, collected his Manco Capac tradition near Lima on the coast about 150 years ago. Since Bandelier (1910) and other late writers have verified myths collected by Cieza at the time of the Conquest, we may find it not impossible that Stevenson's informants also have inherited some fragments of traditions and beliefs current on the Peruvian coast at the time of Oliva. Stevenson's account has been little regarded through the curious circumstance that he, or rather his informants, described the first Inca as an *Englishman* (Ingasman). This is a linguistic mistake which has a very simple and natural explanation: As will be seen, the syllables in the names of Inga Manco Capac and his sister-wife Mama Ocllo are distorted into Ingasman Cocapac and Mama Ocllc.

Stevenson (1825, Vol. I, p. 394) heard this oral tradition at the old Peruvian village of Huacho on the Pacific coast north of Lima. "It was", he writes, "afterwards repeated to me by Indians in various parts of the country, and they assured me that it was true, and that they believed it. A white man [in Quechua text a *viracocha*], they say, wasfound on the coast, by a certain Cacique, or head of a tribe, whose name was Cocapac; by signs he asked the white man who he was, and received for answer, an Englishman [I. e: *Ingasman*]. He took him to his home, where he had a daughter; the stranger lived with him till the daughter of the Cacique bore him a son and a daughter, and then died. The old man called the boy Ingasman Cocapac, and the girl Mama Ocllc; they were of fair complexion and had light hair, and were dressed in a different manner from the Indians. From accounts given by this stranger of the manner in which other people lived, and how they were governed, Cocapac determined on exalting his family; and having instructed the boy and girl in what he proposed to do, he took them first to the plain of Cuzco, where one of the

largest tribes of Indians then resided, and informed them that their God, the sun, had sent them two of his children to make them happy, and to govern them; he requested them to go to a certain mountain on the following morning at sunrise, and search for them; he moreover told them that the *viracochas*, children of the sun, had hair like the rays of the sun, and that their faces were of the colour of the sun. In the morning the Indians went to the mountain, *condor urco*, and found the young man and woman, but surprised at their colour and features, they declared that the couple were a wizard and a witch. They now sent them to Rimac Malca, the plain on which Lima stands, but the old man followed them, and next took them to the neighbourhood of the lake of Titicaca, where another powerful tribe resided; Cocapac told these Indians the same tale, but requested them to search for the viracochas on the edge of the lake at sunrise; they did so, and found them there, and immediately declared them to be the children of their God, and their supreme governors. Elated with his success, Cocapac was determined to be revenged on the Indians of Cusco; for this purpose he privately instructed his grandchildren in what he intended to do, and then informed the tribe that the viracocha, Ingasman Cocapac, had determined to search for the place where he was to reside; he requested they would take their arms and follow him, saying that wherever he struck his golden rod or sceptre into the ground, that was the spot where he chose to remain. The young man and women directed their course to the plain of Cusco, where having arrived, the signal was given and the Indians here, surprised by the re-appearance of the viracochas, and overawed by the number of Indians that accompanied them, acknowledged them as their lord, and the children of their God. Thus, say the Indians, was the power of the Incas established, and many of them have said, that as I was an Englishman I was of their family."

How much original tradition has survived in this Huacho account cannot be judged. In its essence, it supports the statement of Oliva's informants from the same vicinity that Manco Capac entered the highlands from the coast on a deliberate plan that he should be sought for and discovered among the inland tribes as the son of the sun. The shores of Lake Titicaca also come into this legend. And, although the version is different, the Inca progenitors are, as in the Titicaca myth, accounted for by a crossing of two distinct human types. A semi-civilized viracocha from another area, with other dress, and of light complexion, marries locally on the coast, and his light progeny take advantage of their fairer complexion to obtain an ascendancy over the inland tribes by pretending to be of supernatural origin and children of the sun.

The essence of Peruvian traditional memories

We have dwelt at some length on the earliest Inca memories and traditions. This has not been done for the sake of the various details, but only to show how all recollections converge back to a time when Andean culture was focused upon Tiahuanaco and the Titicaca basin—when there were legendary people travelling about in Peru who were not zoomorphic or demoniacal, but Caucasian-like.

All over Peru references are found to such an earlier people whose grandiose creative powers and capacities, coupled with ingenuities and deceptions, with cultural achievements and humanitarian activities, opened the road for the Incas, who copied their forerunners wherever and whenever they found opportunity. We are informed about the physical

appearance of the early Viracocharuna, or Sea-foam-people, principally through the detailed descriptions of their leader, whether he be Viracocha, Tici, Con, Illa, Ticci Viracocha Pachayachachi, Ymaymana Viracocha, Tocapo Viracocha, Coniraya Viracocha, Viracocha-Ra-Pacha, Pacha-ccan, Zapalla Viracocha, Tara-Paca, Tua-Paca, Tu-Paca, Caylla, Usapu, Arunaua, or Tonapa. Through this leader, his sons, disciples, servants and followers, we are given a description of the Tiahuanaco-people that distinguishes them from the bulk of the population by a more highly developed culture, a very light skin-colour, the growth of a beard, and occasionally a tall stature. There are also instances where minor groups are described directly instead of through their own principal 'god' and ruler, as was the case with the isolated and purely human intruders at Vinaque, and those massacred at Titicaca Island. Although they here appear as loose tribal units without any powerful king or hierarchy, yet they were memorized by the other Indians as being unlike all their neighbours, solely in the physical peculiarity of being white and bearded, like the Spaniards.

These two racial characteristics—a light complexion and a beard—are certainly the most readily perceived of all the Caucasian-like features reaching early Polynesia in the East Pacific. Of all such traits they would be those that would most naturally make a lasting impression upon the average Indian of Peru, so that the description of them would survive in tribal and national memory.

The Viracochas and the appearance of the Spaniards

We have seen that the last South American memory of the Tiahuanaco dynasty was that the venerated pre-Inca ruler organized a united departure of his *viracocha*-people from the tropic coast of Ecuador, thus abandoning his own former cult-site and all his Peruvian people. There is no disagreement as to the route he decided upon. As Rowe (1946, p. 316) summarizes the Inca accounts: "He went to Cuzco, and continued northward to the province of Manta in Ecuador. Here he said farewell to his people, and set out across the Pacific walking on the water."

The Peruvian belief in the extinct and departed viracocha race was firm and deeply rooted. The Inca dynasty had so profound a respect for their fair-skinned and bearded forerunners who had departed into the Pacific that, in 1532 Pizarro and his little band of Spanish voyagers were able to conquer, without battle, the vast Inca Empire with its powerful armies and its elaborate megalithic fortresses. For the Spaniards the battle was won merely by appearing with a skin colour and beard such as had been the distinctive features of the departed Viracochas.

The historical implications of the legendary white and bearded men behind the early Inca history have been pointed out by many writers. Karsten (1938, p. 72) refers to the Inca assumption that the first Spaniards to land on the coast were messengers sent back across the Pacific by the long departed Viracocha. He further points to the fact that viracocha "even to this day is the term for a foreign white man among the Indians, in all the countries—Peru, Bolivia and Ecuador—which belonged to the old Inca Empire."

The same author, showing how Viracocha under his various titles or names[1] finally left the highlands while descending to the Pacific coast, says (*Ibid.*, p. 192): "That Viracocha

[1] Karsten (*Ibid.*, pp. 188–192) renders the different names connected with this culture-hero as: Con, Tici, Ticci, Ticsi, Tici Viracocha, Illac Tici Viracocha, Con-Illac-Tici-Viracocha and Con-Tici-Viracocha.

upon the act of creation wanders down towards the coast is perhaps connected with the historical fact that at a certain period the worshippers of the god conquered these regions. That he furthermore is represented as a bearded man who disappears in the great ocean is another feature that possesses historical interest. When the Spaniards during their march of conquest in 1532 arrived on the coast of Peru, they were, as I have already mentioned, taken by the adherents of Huascar for no less than the messengers of the supreme god Viracocha, which came to revenge the injustice committed against the legitimate heir to the throne. Therefore viracocha became to the Indians of Peru a general term for the white man."

Similarly Brinton (1882, p. 199), in his study of American hero-myths, writes of the Spaniards' arrival: "As at the first meeting between the races the name of the hero-god was applied to the conquering strangers, so to this day the custom has continued. A recent traveller tells us, 'Among Los Indios del Campo, or Indians of the fields, the llama herdsmen of the *punas*, and the fishermen of the lakes, the common salutation to strangers of a fair skin and blue eyes is 'Tai-tai Viracocha'. (Squier, Travels in Peru.) Even if this is used now, as M. Wiener seems to think, merely as a servile flattery, there is no doubt but that at the beginning it was applied because the white strangers were identified with the white and bearded hero and his followers of their culture myth, whose return had been foretold by their priests."

There was much speculation among the Spanish conquistadores as to why the term *viracocha* was everywhere applied to their race as they advanced through the vast Inca Empire, and finding the meaning of the word to be "sea foam," many concluded that they had been so called because they had come by sea. Cieza de Leon (1553-60, Bk. II, Chap. V) firmly rejects this opinion, stating that he had sought an explanation among the "long-ears" of Cuzco and had been told that the Spaniards were thus named because they had first been mistaken for the sons of the great god Tici-Viracocha, to whom Huascar's men had prayed for help against their enemy Atahualpa. But when the Spaniards began to violate the *mamaconas* or virgins of the sun, and plunder the sacred temples of Viracocha, the natives soon realized that they were mistaken, and that these men were not the sons of the great Viracocha, but worse than Supais (*Cupay*, i. e. devil). But the name *viracocha* remained as descriptive of the Spaniards and their white and bearded race.

Sarmiento (1572, p. 186), quoted in detail in another place, similarly shows how the Spaniards, arriving with *beards*, were taken for returning viracochas.

Inca Garcilasso also (1609 b, p. 65) stresses that the Spaniards were termed viracochas not because they came by sea, but because of their appearance: "Hence it was that they called the first Spaniards who entered Peru Uira-ccocha, because they wore beards, and were clothed from head to foot, . . . For these reasons the Indians gave the name of Uira-ccocha to the Spaniards, saying that they were sons of their god, Uira-ccocha. . ."

Garcilasso says that their appearance ensured the strange reception of a handful of bearded Spaniards among the vastly superior forces of Peru. He mentions as an example how Hernando de Soto and Pédre de Barco, all alone, set out on long inland journeys among the numerous alien Indians without ever being assaulted; on the contrary they were at once received with enthusiasm among the various tribes who everywhere called them the "sons of the sun".

Nature of Viracocha memories

The viracocharunas and the great man-god Con-Tici Viracocha had all the aspects of humans, but humans with a cultural standing. They grew beards and had a lighter skin than the average Indian, but no more than the Spaniards and the Inca sovereigns do they appear among their contempotaries with any incongruous physical traits that suggest them to be fanciful conceptions. The well-informed and intelligent Inca would never have lent such weight to the accounts of their predecessors from Tiahuanaco if these had been merely the creatures of a native fairy-tale. We must not regard the viracochas as on a level with dragons and unicorns; if they were breathing fire instead of growing beards, and if they could fly, were luminiferous, or green or blue, instead of walking about with a staff and a long girdled mantle, and a fair skin, then the viracocha tales could have been dismissed as born of the human fancy for the supernatural. But as it is, we have every reason to suppose that in their case the human fancy for the supernatural has been stimulated by the observation of some actual human beings differing slightly from the local norm of physique and physiognomy. If the Spaniards had left Peru before they could overthrow the Inca Empire, twentieth century rediscoverers of Pacific South America would have heard quite similar legends of Viracocha Pizarro who came and left by sea with his viracocha followers, except that the Spaniards with their horses, iron swords and muskets would have been raised to a much more supernatural level than the former viracochas of Vinaque and Titicaca.

It seems to me rather rash to assume that natives all over Incaic Peru, Bolivia, and Ecuador should have first improvised and later digested and accepted the physical appearance and geographical routes of the viracochas, had they not once been visited by some people with a somewhat corresponding description and migratory route. Indeed it is less fantastic to suppose that a light-skinned tribe with beards had developed in—or migrated to—this area, seeing that we know an analogous human type to have developed in—or migrated to—both sides of the North American continent and the nearest islands west of Peru, all in pre-Columbian centuries.

That the conception of men with Caucasian-like characteristics might have been due to the sight of the first Spaniards is out of the question, since the traditions are supported by bearded prehistoric portraits carved in Tiahuanaco, Mocachi, and Cacha stone statues, and modelled in Chimbote-, Huamachuco-, Moche-, and Chicama anthropomorphic pottery, all properly ascribed to pre-Spanish—and most of them even to pre-Inca—time.

Hypothesis of white and bearded wanderers being personified light-rays

The Polynesians possessed traditions, both metaphorical and direct, of early Caucasian-like ancestors who had come to settle the Polynesian islands and had thus entered into the forming of the present island stock. The value of these traditions is readily verified through the recent recognition of a Caucasoid element in the original population of these islands. The Peruvians possess complementary traditions and memories regarding their own continental domain, with the only major difference that whereas the Polynesians claim them to have arrived, the Peruvians claim them to have departed.

The possibility that Caucasian-like immigrants could have reached Polynesia by way of the East Pacific has never struck observers, and hence the firm Inca conceptions of pre-Spanish *viracochas* have attracted no attention. They have not been required in any attempt to reconstruct the local Peruvian past, and whenever a bearded pottery vase, a bearded statue, or myths of a white and bearded race have turned up locally, this has meant to the local Peruvianist only a new enigma rather than an answer to an existing problem.

Accordingly, the only hypothesis advanced from competent quarters to account for the Caucasoid conceptions in prehistoric Peru has been designed and launched solely for the purpose of neutralizing their surprising existence. Such a theory, defended by Brinton (1882) and great many others, suggests that all white men with beards (provided they occur in pre-Spanish America) are immaterial personifications of light-rays from the sun. The light skin is the bright light, and the bearded chin is its radiation. Brinton and the defenders of this theory simply exclude from consideration the alternative possibility, that beard and light skin were physical traits known even in America before Columbus. Both alternatives should at least be tested before being either rejected or accepted.

Brinton (*Ibid.*, p. 188), together with Pachacuti, observes how the departed culture-hero Tonapa—described in the previous pages respectively as a bearded man and a white man identical with the creator Viracocha—followed the westward course of a river in descending to the seashore, whence he left Peru. Then he says, referring in part to Garcia (1729, Bk. V, Chap. VII):

"According to another, and also very early account, Viracocha was preceded by a host of attendants, who were his messengers and soldiers. When he reached the sea, he and these his followers marched out upon the waves as if it had been dry land, and disappeared in the West. These followers were, like himself, white and bearded. Just as, in Mexico, the natives attributed the erection of buildings, the history of which had been lost, to the white Toltecs, the subjects of Quetzalcoatl, so in Peru various ancient ruins, whose builders had been lost to memory, were pointed out to the Spaniards as the work of a white and bearded race who held the country in possession long before the Incas had founded their dynasty. The explanation in both cases is the same. In both the early works of art of unknown origin were supposed to be the productions of the personified light rays, which are the source of skill, because they supply the means indispensable to the acquisition of knowledge."

To me, this explanation is more ingenious than natural. Why did the light rays carve stone monuments with beards and tell the people to lengthen their ears, and why did they march due north from Tiahuanaco to Cajamarca and hence climb down along the river from the mountains to the sea, where they all assembled near Puerto Viejo to start walking on the waves? Why were they presented in art with a pointed beard (see Plates XXIV, XXV) rather than with a radiant aureola, and why remembered as having a fair skin rather than a luminiferous one? Indeed the tribal name viracocha-runa or sea-foam people suggests a maritime rather than a celestial body of migrants, and they also travelled by sea and not in the sky.

The only tempting aspect of the theory identifying white and bearded men with personified light rays is that, like the sun, they disappeared over the ocean to the west, and that too

at Puerto Viejo, *suspiciously near the sun's favourite latitude, the Equator*, but—at a rather human and maritime altitude when compared with their heavenly guide the sun. But even this strong-point is weakened when Brinton (*Ibid.*, p. 188) finds it necessary to argue that the ocean-bound Viracocha must actually have turned north and east off the coast, rather than west, as the Peruvian "personified light rays" would otherwise travel in an opposite direction to those of Mexico!

In fact, if we compare the many American myths of the light-skinned and bearded wanderers, we find their movements entirely independent of the route of the sun; they come and go in various directions, and only Puerto Viejo, at the very Equator, and Cape Scott, on the Northwest Coast, are remembered as places where American culture-heroes or parties of travellers have departed westwards into the Pacific. In the many other traditions of the wanderers, these strange and typical New World man-gods move from one given settlement to the other, following remarkably human itineraries, by land or along the coasts, and going as often north or south as east or west, or even back and forth. To the culture-peoples of Mexico and Peru these legendary heroes were apparently no more supernatural in appearance and behaviour than the Spaniards, since the latter were mistaken for the former.

The current misconception that the white and bearded wanderers of the Aztecs and the Incas come and go after a common pattern set by the sun has had a surprising amount of support in view of its loosely founded premises. Brinton (*Ibid.*, p. 200), referring to the historical accounts of how the Incas mistook the Spaniards for viracochas returning from the west across the Pacific, says: "We need no longer entertain about such statements that suspicion or incredulity which so many historians have thought it necessary to indulge in. They are too generally paralleled in other American hero-myths to have the slightest doubt as to their reality, or as to their significance. They are again the expression of the expected return of the Light-God, after his departure and disappearance in the western horizon."

If the viracochas were imaginary light-gods, and as such had disappeared at the *western* horizon and were expected back from across the Pacific rather than over the eastern Cordilleras, then the light-ray theory would require the imaginary light-gods of aboriginal Mexico also to travel in the same direction. Such, however, was not the case. When dealing with the Mexican wanderers, Brinton found that these were said to have departed in the opposite direction, towards Yucatan, and that hence the Aztecs expected their "bearded ones" back from the Atlantic side. About these Aztec beliefs also he wrote (*Ibid.*, p. 141): "They have excited the suspicion of historians and puzzled antiquaries to explain. But their interpretation is simple enough. The primitive myth of the sun which had sunk but should rise again, had in the lapse of time lost its peculiarly religious sense, and had been in part taken to refer to past historical events. The Light-God had become merged in the divine culture hero. He it was who was believed to have gone away, not to die, for he was immortal, but to dwell in the distant east, whence in the fullness of time he would return."

If the departure of the Mexican wanderers in an easterly direction can be used as an argument for the light-ray hypothesis, then their northerly and westward departure from Peru cannot with the same strength serve the same theory, or vice versa. There is also another reason to doubt the consistency of the interpretation under discussion. Brinton

(*Ibid.*, p. 168) suggests that to the American culture-peoples the conceptions of the sunrise in the east and the sunset in the west, with night following day, had become religious, and that gradually "the natural phenomenon had become lost in its personification". On these premises he feels that the departure of the heroes, and the confidence in their future reappearance, could be thus explained (*Ibid.*): "Both of them represented in their original forms the light of day, which disappears at nightfall but returns at dawn with unfailing certainty." Or, as he expresses it elsewhere, (*Ibid.*, p. 30): "The sun shall rise again in undiminished glory, and he lives, though absent." But is the sun absent? So long as the sun *reappears* every morning in undiminished glory, how can the sun be lost in a departed personification for the return of which Mexicans were looking to the east and Peruvians to the west?

Since it is safe to say at least that the migrating bearded spreaders of culture behind the Aztec and Inca traditional history are not obviously "personified light rays", we have little reason to set aside the alternative possibility, that both Aztec and Inca history are actually speaking of bearded humans rather than fading light-rays. The corresponding wanderers who reached Polynesia, according to the island traditions, were obviously humans and not light-rays.

We may follow Brinton further in his analysis of the beliefs and memories under discussion. Amidst the multitude of weird animal stories and beliefs in fantastic supernatural beings that occurred everywhere among the New World Indians, Brinton found one quite distinct and consistent tradition among the more cultured and historically minded peoples, which he terms "the typical American myth". To this he devoted the greater part of his comprehensive monograph on *American Hero-Myths*. We read (*Ibid.*, p. 27):

"The native tribes of this Continent had many myths, and among them there was one which was so prominent, and recurred with such strangely similar features in localities widely asunder, that it has for years attracted my attention, and I have been led to present it as it occurs among several nations far apart, both geographically and in point of culture. This myth is that of the national hero, their mythical civilizer and teacher of the tribe, who, at the same time, was often identified with the supreme deity and the creator of the world. It is the fundamental myth of a very large number of American tribes, and on its recognition and interpretation depends the correct understanding of most of their mythology and religious life. The outlines of this legend are to the effect that in some exceedingly remote time this devinity took an active part in creating the world and in fitting it to be the abode of man, and may himself have formed or called forth the race. At any rate, his interest in its advancement was such that he personally appeared among the ancestors of the nation, and taught them the useful arts, gave them the maize or other food plants, initiated them into the mysteries of their religious rites, framed the laws which governed their social relations, and having thus started them on the road to self development, he left them, not suffering death, but disappearing in some way from their view. Hence it was nigh universally expected that at some time he would return. . . .

"Whenever the personal appearance of this hero-god is described, it is, strangely enough, represented to be that of one of the white race, a man of fair complexion, with long, flowing beard, with abundant hair, and clothed in ample and loose robes. This extraordinary fact

naturally suggests the gravest suspicion that these stories were made up after the whites had reached the American shores, and nearly all historians have summarily rejected their authenticity, in this account. But a most careful scrutiny of their source positively refutes this opinion. There is irrefrangible evidence that these myths, and this ideal of the hero-god, were intimately known and widely current in America long before any one of its millions of inhabitants had ever seen a white man."

Without discussing, or even mentioning, the possibility that the tribes in question could have seen, or included, lighter-coloured individuals with a true beard before the arrival of the Columbian caravels from Europe, Brinton goes on to explain how these Aztec, Maya, Chibcha, and Inca traditions came about: "By sight and light we see and learn. Nothing, therefore, is more natural than to attribute to the light-god the early progress in the arts of domestic and social life. Thus light came to be personified as the embodiment of culture and knowledge, of wisdom, and of peace and prosperity which are necessary for the growth of learning. The fair complexion of these heroes is nothing but a reference to the white light of the dawn. Their ample hair and beard are the rays of the sun that flow from his radiant visage. Their loose and large robes typify the enfolding of the firmament by the light and the winds."

Yet we need only observe the well groomed and aristocratic beard and moustache in the early Mexican portraits on Plates XVII—XXII, or on the pre-Incaic pottery on Plates XXIII—XXV, to realize that we are dealing with a typical human beard and not with the rays from a radiant visage. Nor do we ever learn that the robes of the white wanderers were loose like the enfolding of the firmament, but simply that their dress was unlike that of the common Indian in reaching down below the knees, and in being secured around the waist by a girdle. There are even instances where we learn that Viracocha, or one of them, wore his hair cut short. Never do we learn that the bearded men were radiant or shed light. They were remembered in connection with a solar religion and claimed solar descent, but in effect they were the masters and institutors of these beliefs, rather than resultant personifications of formerly worshipped light-rays.

Sun-worship originated by wanderers rather than the reverse

Many subsequent authors have followed Brinton's conclusions without giving the same serious attention as he did to the mass of material available. It is commonly considered that the almost continuous recurrence from Mexico to Peru of the analogous beliefs in the light-coloured bearded men diminishes their historic value; for it is argued, all along this route the same solar beliefs have created the same myths of white and bearded wanderers and spreaders of culture. Brinton (*Ibid.*, p. 201) says:

"Are we obliged to explain these [Peruvian] similarities to the Mexican tradition by supposing some ancient intercourse between these peoples...? I think not. The great events of nature, day and night, storm and sunshine, are everywhere the same, and the impressions they produced on the minds of this race were the same, whether the scene was in the forests of the north temperate zone, amid the palms of the tropics, or on the lofty and barren plateaux of the Andes. These impressions found utterance in similar myths, and were represented in art under similar forms. It is, therefore, to the oneness of cause and of

GENERALSTABENS LITOGRAFISKA ANSTALT
STOCKHOLM 1932

racial psychology, not to ancient migrations, that we must look to explain the identities of myth and representation that we find between such widely sundered nations."

Again, this statement would have been stronger had the author produced a reason why the conception of the cultural "wanderer" of Mexican, Mayan, Chibchan, and Peruvian traditions could not have spread through the whole of this area by actual inter-tribal migration rather than by the development of an independent philosophy among stagnant and immobile peoples. It is a curious fact that the more modern man develops his own means of cummunication, the less he credits the former mobility of man. People who cross an ocean in a luxury liner have difficulty in perceiving that *at the mere cost of time and comfort* perhaps the same ocean may be readily crossed on a few logs with a contraption to catch the wind; and those who cross a continent by express train forget that others have done it before them without map or track. The human estimation of time and comfort has not always been what it is today, and on this point an immense gap has severed most modern investigators from a full appreciation of the capacity and achievements of former cultures.

The Yellow-brown ancestry of the Quechua and Aymara of Peru, and even their primitive cousins down in the Tierra del Fuego, cannot have been born as light-rays through similar tendencies of the human mind, but must, in the course of time, have come south through Mexico en route from Northwest America and from faraway Asia. A secondary diffusion or transfer of culture or spreaders of culture from Mexico to Peru does not necessarily require much time, not even generations. In 1513 Balboa climbed the hills of the Panama Isthmus and was the first European to sight the Pacific; in 1519 the little Spanish force under Cortes landed in the Gulf of Mexico and began their march into the vast Aztec Empire; by 1533 other small groups of mediæval Spaniards had made several expeditions down South America, and Pizarro with 180 men had then already taken over the Inca Empire; in 1535 Almagro travelled on inland from Andean Bolivia to Argentina and way down into Chile; in 1541 Orellana had climbed the Andean highland from the Pacific side, entered the sources of the Amazone and followed this jungle river to its mouth on the Atlantic.

As Carter (1950, p. 178) puts it: "The Spanish actions in America are probably the best illustrations that we possess of what could have happened in earlier times. There were relatively few Spanish. Yet in the period 1520 to 1540 they explored virtually the entire New World from Kansas to Argentina. Nor can all this be laid to force of arms. Cabeza de Vaca, shipwrecked and barely clad, was able to walk from somewhere on the Gulf Coast of the United States across the continent through all the intervening tribes, to the Gulf of California and thence down to the Spanish holdings in Mexico."[1]

These Spaniards had neither roads nor maps, nor ammunition enough to survive by fighting strength among the American millions. They knew during their "wanderings" less of the dangers and resources of the countries traversed than the culture-heroes who had founded the empires that preceeded those of the Aztecs and Incas.

We have also an interesting example of aboriginal human migration through the most impenetrable territory of the New World, in the earliest decades of written South American

[1] Nuñez Cabeza de Vaca and three companions lost all their possessions in the surf on the coast of Florida, and for a period of eight years (1528–36) they walked unarmed, barefoot, and almost naked from one unknown Indian tribe to the next right across the continent. (See Bandelier [1905]. Zamara's original account was published in 1542.)

history. Sayce (1933, p. 213), referring to a publication by Métraux on the Tupi-Guarani tribes, writes: "About 1540 a Tupinamba tribe left the Atlantic coast and set out toward the west, ten thousand strong. After many vicissitudes and massacres three hundred survivors reached Peru in 1549. Between these rapid movements and the slower drifts of population there are great differences regard to their value as diffusers of culture. A tribe that passes across the greater part of a continent in a few years may leave little trace along its path." Further (p. 221): "The movement of the Tupi between 1540 and 1549 across South America which has been mentioned was due to the mysterious attraction of the 'land where one does not die'. A later migration, affecting the Apapocuva, the Tanygua, and the Oguaiva tribes, was due to the same cause. To find the land of eternal youth these people left their homes about the upper Parana near the frontier between Paraguay and Brazil, and moved toward the shores of the Atlantic. The movement began in 1820 and lasted until 1912." If anything needs to be demonstrated and proved, it is certainly not the practical feasibility and likelihood of actual contact between early Mexico, Central America, and Peru, but rather the feasibility and likelihood of the peoples and cultures in these localities, being able to isolate themselves securely within their own borders, from the day megalithic art and white and bearded culture-heroes were first thought of in the respective regions, until our own race "discovered" America at the time of Columbus.

We shall return to this subject later, when we deal with the distribution of cotton, corn, and other crop plants. We may here only mention in passing that the creator of the world, and mythical 'father' of the white and bearded culture-hero Quetzalcoatl, was in Mexico called *Tonaca*, with the title 'tecutli' meaning chief or lord (*Ibid.*, p. 73), while Viracocha was worshipped under the name *Tonapa*. (Pachacuti 1620, p. 70, etc.) The apparent similarity between the names Tonaca and Tonapa does not speak in favour of an independent evolution of these white and bearded 'wanderers' in Mexico and Peru.

While it is true that the early American memories of white and bearded teachers have a distribution which concurs to a remarkable extent with the American distribution of sun-worship in the broader sense of the word, the question is whether the sun-worship is responsible for the distribution of the white and bearded men, or whether the latter are responsible for the distribution of sun-worship. We should not overlook the latter possibility.

Certain it is that if we take a brief survey of the movements of the white and bearded men they prove to be quite independent of the east to west movement of the sun, whereas they were very keen to *introduce* solar beliefs among the ignorant Indians wherever they came to settle and build, and to make them realize that, as earthly servants and children of the sun, they were themselves to be obeyed and worshipped and given all the material goods due to the god himself and his divine hierarchy.

Quetzalcoatl, the Viracocha of the Aztecs

If we turn to Mexico for a brief comparison, we find that the Aztecs speak of *Quetzalcoatl* as the Incas spoke of *Viracocha*. He was remembered in the Aztec period from Anahuac in Texas to the borders of Yucatan. It may be somewhat misleading to consider a reference to any of these religious and symbolic names as pertaining to one single mythical

deity only. Originally, Quetzalcoatl as well as Viracocha seems to have been the hereditary name of a hierarchical sequence, worshipping and claiming descent from a supreme god of the same name. Only with time have all Quetzalcoatls, like all Viracochas, been amalgamated into one single historic deity—god and creator as well as human culture-hero and mortal benefactor.

The religious and symbolic term *Quetzalcoatl* was neither restricted to one individual in Mexico, nor, probably, was it in its origin a personal name. Often translated freely as the "Plumed Serpent-God", Quetzalcoatl is a composite term. *Quetzal* is the resplendent and highly esteemed Mexican bird *Trogon splendens*, whose precious plumes distinguished ceremonial feather head-dresses like those worn by royalty and chiefs. *Coatl* is the serpent and the sacred symbol of light and divinity (*cohuatl*). Thus we shall see that, unlike Viracocha, Quetzalcoatl did not "walk on the sea," but he travelled along the coast on "a magic raft of serpents."

As Brinton stresses (1882 pp. 73, 82), we have to distinguish between the original Quetzalcoatl, as the invisible and eternal god, and the hierarch Quetzalcoatl, his human high priest and representative on earth: "In the ancient and purely mythical narrative, Quetzalcoatl is one of four divine brothers, gods like himself, born in the uttermost or thirteenth heaven to the infinite and uncreated deity, which, in its male manifestations, was known as *Tonaca tecutli*, Lord of our Existence, ..." Further: "But it was not Quetzalcoatl the god, the mysterious creator of the visible world, on whom the thoughts of the Aztec race delighted to dwell, but on Quetzalcoatl, high priest in the glorious city of Tollan (Tula), the teacher of the arts, the wise law-giver, the virtuous prince, the master builder and the merciful judge."

After this first immigrant priest-king and his god, the chief or superior of his high Toltec priests later bore the same name Quetzalcoatl. Thus the term takes the form of a hereditary title as much as a personal name. As contrary to his heavenly namesake, the ecclesiastical leader Quetzalcoatl was distinctly human, arriving upon a voyage from a former residence referred to as Tula. He was no light ray, but remembered as "a white man with long dark hair and flowing beard, dressed in a strange dress, who came accompanied by builders, painters, astronomers, and handicraftsmen to Anahuac,—made roads, humanised the people, and civilized them, and then disappeared." (Allen 1884.)

Brinton (1882, p. 89) states: "The origin of the earthly Quetzalcoatl is variously given; one cycle of legends narrates his birth in Tollan in some extraordinary manner; a second cycle claims that he was not born in any country known to the Aztecs, but came to them as a stranger.

"Of the former cycle probably one of the oldest versions is that he was a son or descendant of Tezcatlipoca himself, under his name Camaxtli. ... Another myth represents him as the immediate son of the All-Father Tonaca tecutli, under his title Citlallatonac, the Morning, by an earth-born maiden in Tollan. ...

"The second cycle of legends disclaimed any miraculous parentage for the hero of Tollan. Las Casas narrates his arrival from the East, from some part of Yucatan he thinks, with a few followers, a tradition which is also repeated with definitiveness by the native historian Alva Ixtlilxochitl, but leaving the locality uncertain. The historian, Veytia, on the other hand, describes him as arriving from the North, a full grown man, tall of stature, white

of skin, and full-bearded, barefooted and bareheaded, clothed in a long white robe strewn with red crosses, and carrying a staff in his hand."

Diego Duran, quoted by Brinton (*Ibid.*, p. 66), describes the beard of Quetzalcoatl as long and between grey and red in colour. ("*La barba longa entre cana y roja...*")

The people of Quetzalcoatl were the Toltecs, also claimed by Aztec tradition to be tall in stature and light of skin, like their leader. (*Ibid.*, p. 88.)

According to tradition, the warlike behaviour of the local Indians, and the hostility of certain chiefs, made Quetzalcoatl prepare a return voyage to Tula Tlapallan, his own ancestral habitat. Brinton (*Ibid.*, p. 88) says:

"When Quetzalcoatl left Tollan most of the Toltecs had already perished by the stratagems of Tezcatlipoca, and those that survived were said to have disappeared on his departure. The city was left desolate, and what became of its remaining inhabitants no one knew. But this very uncertainty offered a favourable opportunity for various nations, some speaking Nahuatl and some other tongues, to claim descent from this mysterious, ancient and wondrous race.

"The question seems, indeed, a difficult one. When the Light-God disappears from the sky, shorn of his beams and bereft of his glory, where are the bright rays, the darting gleams of light which erewhile bathed the earth in refulgence? Gone, gone, we know not whither." And (p. 104): "To this it may be objected that the legend makes Quetzalcoatl journey toward the East, and not toward the sunset. The explanation of this apparent contradiction is easy... The Light-God most necessarily daily return to the place whence he started."

This is the point were the light-ray theories behind the Toltecs and Viracochas collide and collapse. Viracocha and his followers, and Quetzalcoatl and his men, broke up and left in opposite directions. We learn of Quetzalcoatl's departure (*Ibid.*, p. 115):

"Thus he passed from place to place, with various adventures... At length he arrived at the sea coast where he constructed a raft of serpents, and seating himself on it as in a canoe, he moved out to sea. No one knows how or in what manner he reached Tlapallan."[1] Further:

The legend which appears to have been prevalent in Cholula was somewhat different. According to that, Quetzalcoatl was for many years Lord of Tollan, ruling over a happy people. At length, Tezcatlipoca let himself down from heaven... which so frightened the populace that they fled in such confusion and panic that they rushed over the precipice and into the river, where nearly all were killed by the fall or drowned in the waters. Quetzalcoatl then forsook Tollan, and journeyed from city to city till he reached Cholula, where he lived twenty years. He was at that time of light complexion, noble stature, his eyes large, his hair abundant, his beard ample and cut rounding. In life he was most chaste and honest... The twenty years past, Quetzalcoatl resumed his journey, taking with him four of the principal youths of the city. When he had reached a point in the province of Guazacoalco, which is situated to the southeast of Cholula, he called the four youths to him, and told them they should return to their city; that he had to go further; but that

[1] "These myths are from the third book of Sahagun's *Historia de las Cosas de Nueva España*. They were taken down in the original Nahuatl, by him, from the mouth of the natives, and he gives them word for word, as they were recounted." (*Ibid.*)

they should go back and say that at some future day white and bearded men like himself would come from the east, who would possess the land.[1]

"Thus he disappeared, no one knew whither. But another legend said that he died there, by the seashore, and they burned his body. Of this event some particulars are given by Ixtlilzochitl, as follows: —

"Quetzalcoatl, surnamed Topiltzin, was lord of Tula. At a certain time he warned his subjects that he was obliged to go 'to the place whence comes the Sun,' but that after a term he would return to them, in that year of their calendar of the name *Ce Acatl*, One Reed, which returns every fifty-two years. He went forth with many followers, some of whom he left in each city he visited. At length he reached the town of Ma Tlapallan. Here he announced that he should soon die, and directed his followers to burn his body and all his treasures with him. They obeyed his orders, and for four days burned his corpse, after which they gathered its ashes and placed them in a sack made of the skin of a tiger (*ocelotl*)."

The seashore death and cremation of one of the wandering Quetzalcoatls, surnamed Topiltzin, did not end their lineage, and we may well surmise that a new Quetzalcoatl arose among those of his kin who attended the funeral ceremony. Whether the succeeding Quetzalcoatl, with his surviving disciples, continued the journey east by land into Yucatan, or whether the high priest embarked on a "magic raft" in the Gulf of Mexico, is of minor significance as long as traditions agree that the Mexican viracochas left in an easterly direction towards Yucatan.[2] It is certain that, if not the same, at least a suspiciously similar stock of culture-bearers have been busy also in the minds of the nearest civilized neighbours of the Aztecs to the east, the Mayas of Yucatan. Regardless of their original chronology in these two American areas, the probability of transfer of these culture-bearers or their conceptions one way or the other looms large.

Itzamná Canil and the Great Arrival in Maya history

We may again quote Brinton (*Ibid.*, p. 145), whose careful procedure was first to collect and compare— and next to try to account for—the conceptions of Caucasian-like spreaders of culture among the early American centres of civilization. He says:

"There appear to have been two distinct cycles of myths in Yucatan, the most ancient and general that relating to Itzamná, the second, of later date and different origin, referring to Kukulcan. It is barely possibly that these may be different versions of the same; but certainly they were regarded as distinct by the natives at and long before the time of the Conquest.

"This is seen in the account they gave of their origin. They did not pretend to be autochthonous, but claimed that their ancestors came from distant regions, in two bands. The largest and most ancient immigration was from the East, across, or rather through, the ocean—for the gods had opened twelve paths through it— and this was conducted

[1] "For this version of the myth, see Mendieta, *Historia Eclesiastica Indiana*, Lib. II, caps. V and X." (*Ibid.*)

[2] Brinton (*Ibid.*, p. 133) writes: "Quetzalcoatl was gone. Whether he had removed to the palace prepared for him in Tlapallan, whether he had floated out to sea on his wizard raft of serpent skins, or whether his body had been burned on the sandy sea strand and his soul had mounted to the morning star, the wise men were not agreed. But on one point there was unanimity. Quetzalcoatl was gone; but *he would return.*"

by the mythical civilizer Itzamná. The second band, less in number and later in time, came in from the West, and with them was Kukulcan. The former was called the Great Arrival; the latter, the Lesser Arrival...

"To this ancient leader, Itzamná, the nation alluded as their guide, instructor and civilizer. It was he who gave names to all the rivers and divisions of land; he was their first priest, and taught them the proper rites wherewith to please the gods and appease their ill-will; he was the patron of the healers and diviners, and had disclosed to them the mysterious virtues of plants...

"It was Itzamná who first invented the characters or letters in which the Mayas wrote their numerous books, and which they carved in such profusion on the stone and wood of their edifices. He also devised their calendar, one more perfect even than that of the Mexicans, though in a general way similar to it.[1] Thus Itzamná, regarded as ruler, priest and teacher, was, no doubt, spoken of as an historical personage, and is so put down by various historians, even to the most recent."[2]

But as with Viracocha and Quetzalcoatl, we suspect a lineage rather then an historic person in this cultured migrant, since hé, too, has inherited the name of the creator whom he represents on earth. (*Ibid.*, p. 147.) An important surname of Itzamná is *Canil*. (See further Part X.)

As shown by Morley (1946, p. 222) in his *Ancient Maya*, Itzamná was occasionally remembered as being bearded.

Kukulcan the Viracocha of the Mayas

After this Great Arrival came the Lesser (*Ibid.*, p. 159):

"The second important hero-myth of the Mayas was that about Kukulcan. This is in no way connected with that of Itzamná, and is probably later in date, and less national in character. ...

"The natives affirmed, says Las Casas, that in ancient times there came to that land twenty men, the chief of whom was called 'Cocolcan,' ... They wore flowing robes and sandals on their feet, they had long beards, and their heads were bare. They ordered that the people should confess and fast...

"Kukulcan seems, therefore, to have stood in the same relation in Yucatan to the other divinities of the days as did Votan in Chiapa and Quetzalcoatl Ce Acatl in Cholula."[3]

We learn from Brinton (*Ibid.*, p. 162) that Kukulcan was one of four 'brothers', each ruling his own tribe. One of the others having died or departed, and two been put to death, only Kukulcan remained. He instructed the people in the arts of peace, and caused various important edifices to be built at Chichen Itza. He also founded and named the city of Mayapan.

[1] "The authorities on this phase of Itzamna's character are Cogolludo, *Historia de Yucatan*, Lib. IV, cap. III; Landa, *Cosas de Yucatan*, pp. 285, 289, and Beltran de Santa Rosa Maria, *Arte del Idioma Maya*, p. 16. The latter has a particularly valuable extract from the now lost Maya Dictionary of F. Gabriel de San Buenaventura." (*Ibid.*)

[2] "Crescencio Carrillo, *Historia* Antigua de Yucatan, p. 144, Mérida, 1881." (*Ibid.*)

[3] Renaud (quoted: Southwestern Lore, p. 23) identifies Kukulkan directly with Quetzalcoatl: "Kukulkan, the Toltec Quetzalcoatl, went to Yucatan where he became a wise ruler, an organizer, a builder of cities and temples and a cultural hero. Finally, the Maya accepted him as a great divinity, a solar god, parallel to their own god Itzamna."

"Under the beneficent rule of Kukulcan, the nation enjoyed its halcyon days of peace and prosperity. The harvests were abundant and the people turned cheerfully to their daily duties, to their families and their lords. They forgot the use of arms, even for the chase, and contended themselves with snares and traps."

The mere idea of Maya tradition inventing such a peaceloving doctrine as the mental characteristic of this immigrant priest-king is as surprising as is the insistence on the loose robe and the flowing beard of this cultured wanderer and his score of bearded followers who entered Yucatan from the west. Nevertheless his humanitarian teachings and activities concur completely with those of Quetzalcoatl, who led his band of followers out of Mexico towards Yucatan, or to the east, and promised that at some future day white and bearded men like himself would come back from that direction. For, of Quetzalcoatl Aztec tradition tells us (*Ibid.*, p. 116) that:

"...he forbade the sacrifice either of human beings or the lower animals, teaching that bread, and roses, and flowers, incense and perfumes, were all that the gods demanded; and ... he forbade, and did his best to put a stop to, wars, fighting, robbery, and all deeds of violence. For these reasons he was held in high esteem and affectionate veneration, not only by those of Cholula, but by the neighbouring tribes as well, for many leagues around. Distant nations maintained temples in his honour in that city, and made pilgrimages to it, on which journeys they passed in safety through their enemy's countries."

Brinton (*Ibid.*, p. 164), following Pio Perez, also shows that one of the Maya chronicles "opens with a distinct reference to Tula and Nonoal, names inseparable from the Quetzalcoatl myth. ... The probability seems to be that Kukulcan was an original Maya divinity, one of their hero-gods, whose myth had in it so many similarities to that of Quetzalcoatl that the priests of the two nations came to regard the one as the same as the other."

It is at least interesting to note that Kukulcan is simply a translation of Quetzalcoatl. *Kukul* is the Maya term for the *Quetzal*-bird, and *kan* is a serpent. (Verrill 1929, p. 101.)

Since Yucatan juts out as a peninsula into the Mexican Gulf, a terrestrian or coastal migrant cannot pass further east unless he enters the open ocean. And, whereas Quetzalcoatl disappeared on an eastward raft voyage from Mexico proper towards Yucatan, so Kukulcan finally left on a westward journey from Yucatan, which would necessarily take him back to Mexico or else down the Central American isthmus (*Ibid.*, p. 163): "At length the time drew near for Kukulcan to depart. He gathered the chiefs together and expounded to them his laws. From among them he chose as his successor a member of the ancient and wealthy family of the Cocoms. His arrangements completed, he is said, by some, to have journeyed westward, to Mexico, or to some other spot toward the sun-setting."

Votan, bringer of culture to the Tzendals

Since a westward migrant from Yucatan would necessarily enter the habitat of the Tzendals, whose home was in Tabasco and Chiapas, it may be interesting to see what can be found in Tzendal legends. Brinton (1882, p. 212) shows how Tzendal traditions are centred around the arrival of a foreign culture-hero referred to as Votan or *Uotan*, in Tzendal literally "the heart," from the Maya root-word *tan*, which means primarily "the breast". The Votan myth was originally told in the Tzendal tongue by a Tzendal native, and the

manuscript of five or six folios came into the possession of Nuñez de la Vega, Bishop of Chiapas, about 1690. Brinton says:

"Few of our hero-myths have given occasion for wilder speculation than that of Votan...

"At some indefinitely remote epoch, Votan came from the far East. He was sent by God to divide out and assign to the different races of men the earth on which they dwell, and to give to each its own language. The land whence he came was vaguely called *ualum uotan*, the land of Votan. His message was especially to the Tzendals. Previous to his arrival they were ignorant, barbarous, and without fixed habitations. He collected them into villages, taught them how to cultivate the maize and cotton, and invented the hieroglyphic signs, which they learned to carve on the walls of their temples. It is even said that he wrote his own history in them. He instructed civil laws for their government, and imparted to them the proper ceremonials of religious worship. For this reason he was also called 'Master of the Sacred Drum', the instrument with which they summoned the votaries to the ritual dances. They especially remembered him as the inventor of their calendar. His name stood third in the week of twenty days, and was the first Dominical sign, according to which they counted their year, corresponding to the *Kan* of the Mayas. As a city-builder, he was spoken of as the founder of Palenque, Nachan, Huehuetlan—in fact, of any ancient place the origin of which had been forgotten...

"Votan brought with him, according to one statement, or, according to another, was followed from his native land by, certain attendants or subordinates, called in the myth *tzequil*, petticoated, from the long and flowing robes they wore. These aided him in the work of civilization. On four occasions he returned to his former home, dividing the country, when he was about to leave, into four districts, over which he placed these attendants.

"When at last the time came for his final departure, he did not pass through the valley of death, as must all mortals, but he penetrated through a cave into the under-earth, and found his way to 'the root of heaven'. With this mysterious expression, the native myth closes its account of him."

Further (*Ibid.*, p. 215): "According to an unpublished work by Fuentas, Votan was one of four brothers, the common ancestors of the southwestern branches of the Maya family. All these traits of this popular hero are too exactly similar to those of the other representatives of this myth, for them to leave any doubt as to what we are to make of Votan. Like the rest of them, he and his long-robed attendants are personifications of the eastern light and its rays." (*Sic!*)

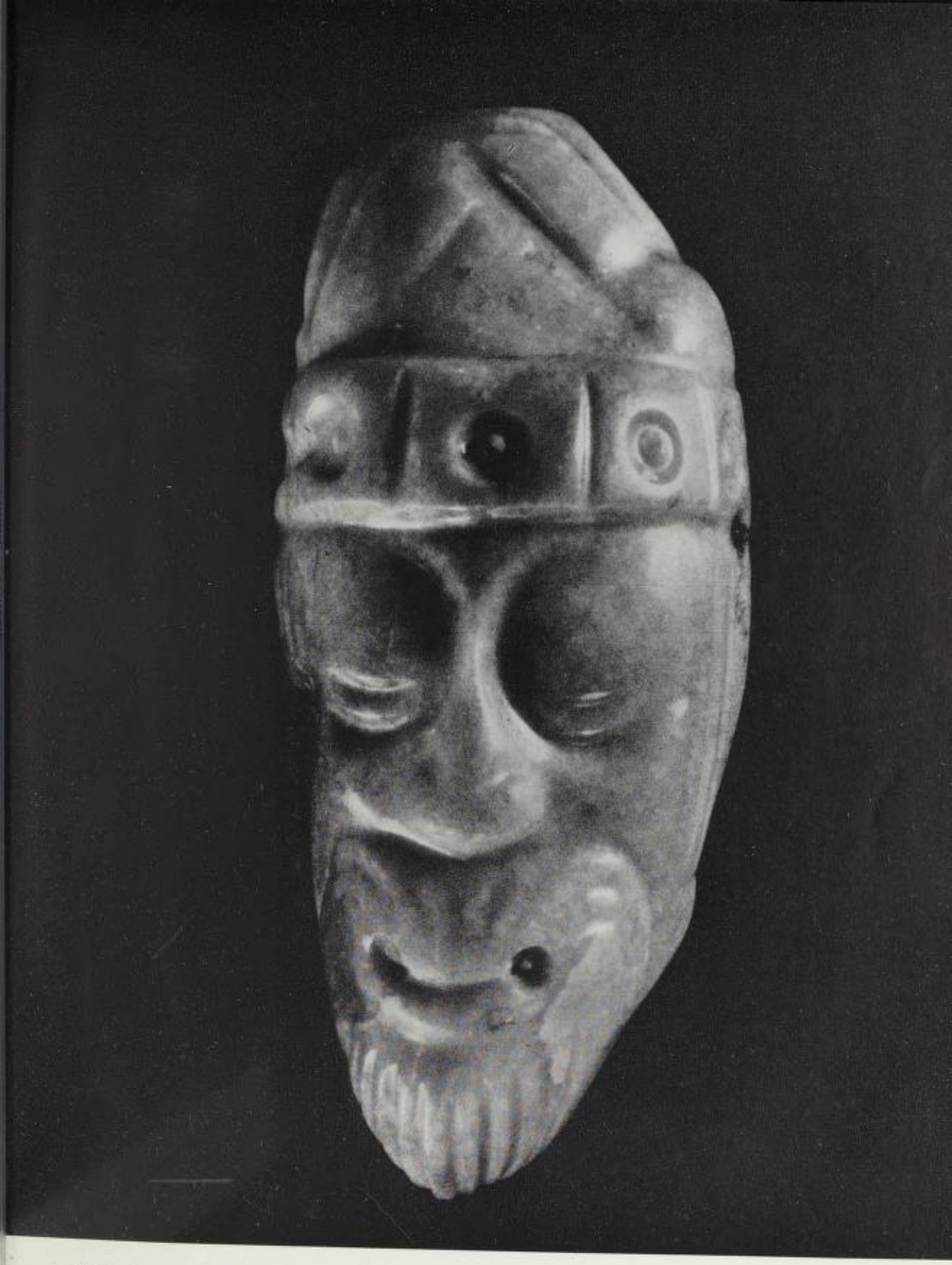
Condoy, culture-bringer to the Zoques

When he left the lofty plateaux and sierras of Chiapas, Votan went neither east like Quetzalcoatl nor west like the sun, but disappeared mysteriously through "a cave" into the "under-earth". Yet we do not have to climb further down than to the lowlands and the coastal area among the Zoques (*Ibid.*, p. 218) before he reappears:

"The Zoques, whose mythology we unfortunately know little or nothing about, adjoined the Tzendals, and were in constant intercourse with them. We have but faint traces of the early mythology of these tribes; but they preserved some legends which show that they also parttook of the belief, so general among their neighbors, of a beneficent culturegod.

The sheltered underside of a large stela excavated in the Tabasco jungle revealing a strangely Caucasian-like face with flowing beard. "His aquiline nose and aristocratic features were different from all other faces depicted at the site." (Stirling 1940, p. 327.) (From *National Geographic Society-Smithsonian Inst. Arch. Exp. to S. Mexico, 1939-40.*)

Bearded pottery head of pre-Columbian origin. From Rio Balsas, Guerrero, Mexico. (Photo: *Amer. Mus. Nat. Hist.*)



Jadeite head representing the bearded culture hero Quetzalcoatl, Mexico. (Photo: *Musée de l'Homme, Paris.*)

1 Clay head from Tres Zapotes, Vera Cruz, Mexico. (Photo: *N. G. S.* From *National Geographic Society-Smithsonian Inst. Arch. Exp. to S. Mexico, 1939-40.*)

2 Low relief carved on back of prehistoric stone mirror from Vera Cruz, Mexico. (Photo: *Amer. Mus. Nat. Hist.*)

This myth relates that their first father, who was also their Supreme God, came forth from a cave in a lofty mountain in their country, to govern and direct them... They did not believe that he had died, but that after a certain length of time, he, with his servants and captives, all laden with bright gleaming gold, retired into the cave and closed its mouth, not to remain there, but to reappear at some other part of the world and confer similar favors on other nations. The name, or one of the names, of this benefactor was Condoy, the meaning of which my facilities do not enable me to ascertain."

Vestiges of the wanderer through Central America

South or east along the isthmus from Tzendal territory live the Kiches of Guatemala (*Ibid.*, p. 210), who were not distant relatives of the Mayas of Yucatan. Their mythology has been preserved in a rescript of their national book, the *Popol Vuh*. They were well acquainted with the "wanderer," who seemed to have passed through their territory more than once. He was known in Guatemala under various names, one of which was Gucumatz. Under the name of Xbalanque he had been down in the "Underworld" fighting on behalf of the Kiches against the powerful enemies ruling there, beneath their lofty mountain plateaux: "On his return, he emerged from the bowels of the earth and the place of darkness, at a point far to the east of Utatlan, at some place located by the Kiches near Coban, in Vera Paz, and came again to his people, looking to be received with fitting honors. But like Viracocha, Quetzalcoatl, and others of these worthies, the story goes that they treated him with scant courtesy, and in anger at their ingratitude, he left them forever, in order to seek a nobler people."

Leaving Mexico proper, Yucatan, Tabasco, Oaxaca, Chiapas, and Guatemala, the "wanderer" had apparently little choice but to transfer his activities further down the Isthmus. Although legend may here be less informative, the portraits of strangely bearded men which crop up first on Salvador pottery (Lehmann 1924, p. 39), and next on the monuments of the megalithic high culture site at Coclé in Panama (Verrill 1929, p. 81), leave no doubt as to similar worship having taken place there. And no sooner do we leave the deserted site at Coclé, and enter Colombia with the surviving Chibcha culture, than the vivid memories of white and bearded culture-bringers spring up to meet us anew.[1]

[1] Before we leave Panama, however, we may note some distorted fragments of myths among the interesting Cuna people who live on the Isthmus just where Colombia and the Southern continent begin. Stout (1950, p. 267) writes of the Cuna: "Knowledge of the medicines and medicine chants, the girls' ceremony chants, and the mythology is in the care of the various types of medicine men and the ceremonial leaders. It is all passed on to their pupils during long courses of training for which the pupils pay in labor and goods. Familiarity with this body of knowledge brings considerable prestige and is prerequisite to being elected chief or second chief." As is so common among the people of the New World, the Cuna begin their history with the creation of the world by a god, who later "destroyed the world by fire, darkness, and flood because the people sinned." According to Stout (*Ibid.*), this flood occurred several centuries ago, "and after it there appeared a great personage who came to earth on a plate of gold and tought the people how to behave, what to name things, and how to use them. He was followed by a number of disciples who spread his teachings, and who, in turn, were followed by ten great shamans, one of them a woman. These shamans had great powers over the elements. They investigated the underworld and heavens and discovered many medicines. These exploits grade into accounts of legendary chiefs and heroes who led the *Cuna* in their wars with the Spaniards and who led whole villages of the *San Blas Cuna* down from the mountains and out onto the islands."

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Bochica, the Viracocha of the Chibchas

The peaceful and highly organized Muyscas, or Chibchas, lived in the lofty plateau of the Northern Andes, where they had found a better climate and an altogether more favourable residence than in the swampy jungle-areas along the lowland coasts of Panama and Colombia whence their ancestors must once have arrived. Their high cultural level and social standing place them, with the early Mexicans and Peruvians, among the most outstanding nations of aboriginal America. Their traditional history attributes their ancestors' cultural teaching to a foreign immigrant generally referred to as Bochica, Nemterequetaba, or Xue, who is said to have come from the east and to have entered the territory of Bogota at Pasca on its southern border. (Joyce 1912, p. 12.)

"North of Peru, the Muysca Indians of the plain of Cundinamarca in Colombia had a legend of one called Bochica, a white man with a beard, who appeared suddenly amongst them, while savages, and taught them how to build and sow, and formed them into communities, settling their government." (Allen 1884; see also Stevenson 1825, Vol. I, p. 398.)

To return to Brinton's Hero Myths, he writes of the Muyscas (1882, p. 220): "The knowledge of these various arts they attributed to the instructions of a wise stranger who dwelt among them many cycles before the arrival of the Spaniards. He came from the east, from the llanos of Venezuela or beyond them, ... His hair was abundant, his beard fell to his waist, and he dressed in long and flowing robes. He went among the nations of the plateaux, addressing each in its own dialect, taught them to live in villages and to observe just laws. Near the village of Coto was a high hill held in special veneration, for from its prominent summit he was wont to address the people who gathered round its base. ... For many years ... did he rule the people with equity, and then he departed, going back to the East whence he came, said some authorities, but others averred that he rose up to heaven. At any rate, before he left, he appointed a successor in the sovereignty, and recommended him to pursue the paths of justice.[1] ...

"That this culture-hero arrives from the East and returns to the East are points that at once excite the suspicion that he was the personification of the Light. But when we come to his names, no doubt can remain. These were various, but one of the most usual was *Chimizapagua*, which, we are told, means 'a messenger from *Chiminigagua*.' In the cosmogonical myths of the Muyscas this was the home or source of Light, and was a name applied to the demiurgic force. ... Modern grammarians profess themselves unable to explain the exact meaning of the name *Chiminigagua*, but it is a compound, in which, evidently, appear the words *chie*, light, and *gagua*, Sun.

"Other names applied to this hero-god were Nemterequeteba, Bóchica, and Zuhe, or Sua, the last mentioned being also the ordinary word for the Sun. He was reported to have been of light complexion, and when the Spaniards first arrived they were supposed to be his envoys, and were called *sua* or *gagua*, just as from the memory of a similar myth in Peru they were addressed as Viracochas."[2]

[1] "Lucas Fernandez Piedrahita, *Historia General de las Conquistas del Nuevo Reyno de Granada*, Lib. I, cap. III, Amberes, 1688." (*Ibid.*)

[2] "The principal authority for the mythology of the Muyscas, or Chibchas, is Padre Pedro Simon, *Noticias Historiales de las Conquistas de Tierra Firme en el Nuevo Reyno de Granada*, Pt. IV, caps. II, III, IV, printed in Kingsborough *Mexican Antiquities*, Vol. VIII, and Piedrahita as above quoted." (*Ibid.*)

Zume, culture-bringer east of the Andes

If this Bóchica, or Zuhe, or Xue, actually entered the territory of Bogota from the east or from the llanos of Venezuela, there is every reason to associate him, or his lineage, with the legendary Tsuma or Zume, a colleague wanderer and teacher whose memory was venerated among the aboriginal Indians of Venezuela when Europeans arrived. In fact, although rarely if ever remembered as settling anywhere for any length of time, as among the Aztec, Maya, Chibcha, and Inca ancestors, yet the same wandering high priest has occupied the minds of South American Indians over wide areas:

"Wherever the widespread Tupi-Guarani race extended—from the mouth of the Rio de la Plata and the boundless plains of the Pampas, north to the northernmost islands of the West Indian Archipelago—the early explorers found the natives piously attributing their knowledge of the arts of life to a venerable and benevolent old man whom they called 'Our Ancestor', *Tamu*, or *Tume*, or *Zume*. . . .

"The legend was that Pay Zume, as he was called in Paraguay (Pay = magician, diviner, priest), came from the East, from the Sun-rising, in years long gone by. He instructed the people in the arts of hunting and agriculture, especially in the culture and preparation of the manioca plant, their chief source of vegetable food. Near the city of Assumption is situated a lofty rock, around which, says the myth, he was accustomed to gather the people, while he stood above them on its summit, and delivered his instructions and his laws, just as did Quetzalcoatl from the top of the mountain Tzatzitepec, the Hill of Shouting. . . . He lived a certain length of time with his people and then left them, going back over the ocean toward the East, according to some accounts. But according to others, he was driven away by his stiff-necked and unwilling auditors, who had become tired of his advice. They pursued him to the bank of a river, and there, thinking that the quickest riddance of him was to kill him, they discharged their arrows at him." (*Ibid.*, p. 223.) But the fleeing culture-hero apparently caught the arrows in his hand and, by his own divine powers walked across the river and so disappeared from their view in the distance.[1]

Since from its seat in the Bolivian highlands the Tiahuanaco influence is traceable into the adjoining territories of northern Paraguay and also northern Argentine and Chile, one may well assume that individual 'envoys' or 'disciples' from this important cult-site had been active in wide areas of their own native continent. With this in mind it is not so surprising to find that the conception of the wandering teacher has been so well preserved in these far-flung localities. Bolivian highland myths are full of references to a teacher of culture who walked about among their villages and settlements without the slightest restriction of his movements to a line from east to west. We make a mistake if we think that the territories in which the cult- and culture-yielding wanderer is remembered are too vast for the energetic activity of one coherent group of men. The inhabitants of the plains and jungles of early America, accustomed to pace the landscape by steps or by

[1] "...see Nicolao del Techo, *Historia Provinciæ Paraquariæ*, Lib. VI, cap. IV, 'De D. Thomæ Apostoli itineribus;' and P. Antonio Ruiz, *Conquista Espiritual hecha por los Religiosos de la Compañia de Jesus an las Provincias del Paraguay, Parana, Uruguay y Tape*, fol. 29, 30 (4to., Madrid 1639). The remarkable identity of the words relating to their religious beliefs and observances throughout this widespread group of tribes has been demonstrated and forcibly commented on by Alcide D'Orbigny, *L'Homme Americain*, Vol. II, p. 277." (*Ibid.*)

paddle-strokes, did not consider the distances they had to cover nearly so great as they would seem to a twentieth century traveller if he was deprived of his train, car or plane and left to man's natural means of propulsion.

Conclusion

In closing our survey of the traditional references to the wandering teachers and institutors of culture in aboriginal America, we cannot leave out of sight the possibility that the great ecclesiastical centres between Mexico and Bolivia may have had individual messengers and disciples travelling far afield. There were indeed both religious fanatism and an expansionist tendency behind the hierarchic empires in question. Bancroft summed up the position in 1875: "All the myths relative to the founders of the different American civilizations make reference to persons who have the same characters. All are white, bearded, generally covered with long vestments; they appear suddenly and mysteriously ... and disappear in a super-natural way."

The specified traditions of light-skinned and bearded founders of culture were most prominent and complete among the Aztec, Maya, Chibcha, and Inca nations, that is, among the natives with the highest cultural standing in the New World, and we have also ample evidence to verify that these historic nations really did owe their cultural standing to other people with even more impressive high-cultures, who had been active in just these same localities in earlier times. These original culture-bearers are known to us only through their archaeological remains, chiefly consisting of deserted ecclesiastical sites. It is noteworthy that all the known culture peoples concerned disclaim the honour of having constructed these monuments, or of having originated their own cultural standards, and give all the credit to foreign intruders remembered as having lighter skins than themselves, long beards, marked ecclesiastic interests and benevolent characters. These traditional teachers cannot have been "personified light rays", as they and their followers did not—as so frequently asserted—appear in the east and disappear in the west. True, the viracochas of Peru disappeared into the west, but from Ecuador, and upon a northward journey from Tiahuanaco and Titicaca Island. True, the Mexican Quetzalcoatl and his followers appeared from the east, but they disappeared towards the east also. And the Mayan Kukulcan and his followers came from the west, from the setting sun, and disappeared in the same direction. They are in all their nature human migrants, represented in native superstition as supernatural wanderers and messengers from the sun, rather than light-rays independently personified in the high-culture areas of early America as long-robed men with beards.

The evidence of archaeology

Leaving now the oral vestiges of the wanderer, we find supporting evidence in some of the prehistoric murals, pottery portraits, stone sculptures, and pre-Columbian Codices, all painted, moulded, carved, and written before Columbus and his followers affected aboriginal life in America, in certain cases even before the transfer of power from the primeval high-cultures to the subsequent Mayas, Aztecs, or Incas.

The possibility of a spread of culture between Mexico and Peru, and the local appearance in art representations of strongly bearded culture heroes, are respectively one of the most discussed and one of the most puzzling problems of American pre-history.

Some able observes of Peruvian antiquities, such as Tschudi (1851) and Angrand (1866), advanced at an early date the theory that aboriginal Peru had received cultured immigrants and inspirations directly from early Mexico. For many decades any claim of such or similar diffusion possibilities between pre-Columbian Peru and North or Central America were met with considerable scepticism. The Mexican and Central American authority Spinden (1917), although generally opposed to the importance of diffusion, was nevertheless among the first of contemporary scholars to accept the importance of a comparative study of the early culture-centres north and south of Panama. "It is surely significant" he says (*Ibid.*, p. 56), "that a stratification of human remains at Ancon, Peru, as explained by Dr. Max Uhle, shows plastic art in clay similar if not identical with that of Central American in the lowermost level." Yet, until very recent decades it has been the opinion of most followers of the contemporary school of anthropology that man, in all his local varieties, came to America as a savage barbarian, and that no important evolution began until he had spread as such, roughly speaking, to all his final destinations within the Americas. Many have even inclined to the belief that, from an archaic culture based on primitive hunting and collecting, high-culture with all its diversified aspects developed out of savage mentality and activities, each tribe and nation beginning from the bottom, independent of other American cultures, and developing analogous features merely through the parallel inclinations of human nature.

This theory is, to a greatly modified extent, still occasionally found today, although rapidly losing supporters. The danger of this hypothesis is, indeed, not that it is contrary to the universal claim of all the historically minded peoples of aboriginal America, but that it fails to find verification or support in archaeological material and excavation. Linné (1939, p. 3) says: "In the Valley of Mexico, the archaeologists have penetrated as far down as to the times of the primitive agriculturists, the so called archaic culture. Here, already, we are confronted with the peculiar phenomenon characteristic of America, that the cultures appear suddenly, quite readily formed and without strong relations between each others. Subsequently they develop further, within the limits of a narrow margin, then disappear to be succeeded by others. A new stock with other artistic intentions but in many ways with corresponding modes of living, weapons, and tools, have taken possession of the land."

This sudden appearance and disappearance of American culture in full bloom, and with such elaborate and intricate standards that we often find in subsequent periods signs of retrogression or cultural decay rather than a maintenance of the original knowledge and achievements, is as typical of high-cultures of South America as of those of Mexico and Yucatan. If each of these American cultures and civilizations had been independently developed by the savages within its own area, one would expect, at least in some localities, to find traces of a slow evolution from low and primitive forms. But as we do not, we should at least simplify our problems by admitting the possibility that high-culture may have been developed by aboriginals in one area and spread as an inspiration to others.

Among the contemporary Peruvian archaeologists who have realized these apparent

difficulties and drawn the natural conclusions is Kroeber (1925, 1930 b, 1945). As long ago as 1925 (p. 212) he suggested, from evidence found in Moche pottery of north coastal Peru, that this territory had received impulses from the Isthmus or Mexico. In 1930 he argues for further connection between the two areas in his paper "Cultural Relations between North and South America." Analyzing the cultural structures and their relations between these two adjoining sections of the New World, he finds a fundamental unity underlying the Mexican and Peruvian conceptions and products, saying: "There is too much in common to believe otherwise."

As is well known, *it is easier to distinguish and separate cultures by sorting out the patterns and colours of pottery than it is to search behind the discriminating details for some measure of common origins and wider unity*. We cannot successfully use the same procedure for uniting the cultures as we use for discriminating between them. Kroeber (*Ibid.*, p. 20) clearly demonstrates this by stressing that the differentiation in styles and forms is no evidence against there being a common inspiration behind the Mexican and Peruvian high-cultures. "Many Mexican peoples, the Maya and Tarasca for instance, differ," he says, "almost as much among themselves."

In addition to the material culture traits which he found to have spread throughout the whole region between the lakes of Tezcoco in Mexico and Titicaca in Peru-Bolivia, Kroeber further points out "the myth of the departing bearded culture institutor." He regards the Peruvian cultures probably a little younger than the Mexican, but: "In each case the culture meets us full blown." As no subsequent evidence has seriously challenged Kroeber's view, we may well bear in mind the possibility that the traditions of the small groups of *wandering* institutors of culture might have spread locally through *wanderings* rather than through independent conceptions along their routes. We shall therefore analyse some archaeological evidence that may serve to throw further light on the bearded migrants of the Tici-Viracocha class.

Light hair and beards painted in Mexican codices before Columbus

Of the numerous hand-written codices or books which fell into the hands of the early Spaniards upon the conquest of Mexico, the vast majority were solemnly burned by the Spanish priests on open bonfires in the village streets. But from the few that escaped destruction, we learn that the idea of light hair and beard did not enter America with Columbus. Thus, in the *Tonalamatl* of the Aubin collection[1]—a pre-Columbian codex preserved in the National Library in Paris—the aboriginal Mexican authors have left us with multicoloured hand-paintings of former heroes and deities. Of some 275 human heads with their hair clearly drawn, more than a hundred appear with hair of a light brown colour, the rest having black or very dark hair.

Beards are drawn in several codices. Thus in *Codex Vaticanus* 3773, another pre-Columbian book from Mexico and in Anahuac hand-writing, eleven men with realistic, unmistakeable beards are represented. Humboldt (1810, p. 47, 48) reproduces about a dozen other bearded men from the hieroglyphic paintings in the Mexican manuscript preserved in the Imperial Library of Vienna.

[1] See bibliography: Codex Tonalamatl Aubin.

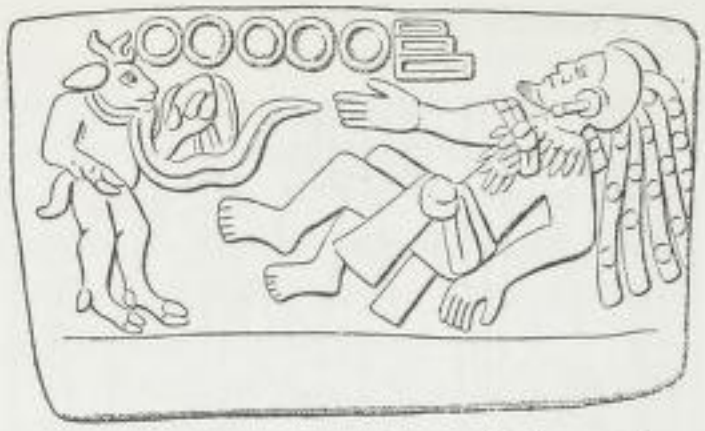
Race traits depicted in Yucatan art

It is well known that we find pre-Columbian stone-carvings of bearded and whiskered men among the human portraits in early Yucatan. (Holmes 1919, p. 26.) In the ruins of Chitzen Itza, the centre of Kukulcan's activities before the founding of Mayapan, bearded figures carved in relief are quite frequent. (Seler 1910.) One of these, carved on a pilaster of the south jamb of the entrance door to the Temple of the Warriors, is reproduced here as drawn by Morris, Charlot, and Morris (1931, Pl. 40). Another is reproduced in Plate XXI **1**.

Verrill (1929, p. 137), referring to the holy city of Chitzen Itza—dedicated by the Mayas to Kukulcan—says: "...its 'Temple of the Jaguars' surpasses any other known prehistoric structure in its beauty of design, its impressive carvings, its magnificent coloring and its wonderful frescoes. ... Among the innumerable bas-reliefs, which cover both the exterior and interior of the temple, are many figures of bearded men. It has been suggested that these represent priests of Kukulcan or the 'Plumed-Serpent-god', who was always depicted with a beard, the supposition being that his priests either wore real beards or donned artificial ones. But is it not equally probable that these bearded figures represent those mysterious 'bearded ones' who, according to Mayan, Aztecan and Incan legends, visited America ages before the coming of the Spaniards? There is a remarkable frequency of bearded gods and figures in both Mayan and Aztec sculptures and art, and at Itzamak the figure of Hunpictok (commander-in-chief of eight thousand flints) shows a moustached man where it is carved on the stones of his palace. In many places, too, human beings are shown with remarkable flat-topped heads, and it is a most interesting and suggestive fact that most of the monolithic statues or idols discovered at the Coclé temple site in Panama had precisely the same flat-topped craniums, and that several had beards."

Pre-Columbian frescoes of a marine battle with a fair-haired race

In their richly illustrated and exhaustive study of *The Temple of the Warriors at Chitzen Itza, Yucatan*, Morris, Charlot, and Morris (1931) take up for discussion the fact that more than one race of men is depicted in the important frescoes on the interior walls. They stress, in several places, the exactness with which the ancient artists have striven to depict and emphasize the racial characteristics and distinctions of their models. Thus (*Ibid.*, p. 443): "Many of the Spanish writers recorded comments on the Maya as they appeared at the time of the Conquest, which, when compared with the material in the present volume, give striking corroborative proof of the exactness with which Maya representational art



Stone relief from Cozumalhuata in Guatemala. (From Krickeberg 1950.)

followed the original models." This testimony increases the interest attaching to the artist's effort to depict for posterity an unidentified tribe or race, produced in the midst of the usual Maya paintings.

Morris, Charlot, and Morris (*Ibid.*, Vol. II, Pl. 147) append the following caption to a reproduction of one of the principal mural paintings in the temple:

"The section of the wall which was found in situ portrayed a sea battle wherein black warriors were victorious over a fair-skinned folk having long yellow hair studded with green beads." Also (*Ibid.*, Plate 146): "Murals from Areas 19 to 21 depict a series of relating episodes concerning a fair-skinned people with flowing yellow hair, defeated in battle and subsequently sacrificed by conventionally equipped blackskinned warriors. The unusual characteristics of the former group, a member of which is here represented in seeking escape by swimming, gives rise to much interesting speculation as to their identity." (See Plates XXIX—XXXII.)

Further (*Ibid.*, p. 444): "Figure 300 c exemplifies an exceedingly interesting type of unfortunates who are being overwhelmed by armed men in Areas 20 to 21, and who later are sacrificed in Area 19. The figures possess neither clothing nor weapons, and, aside from the rather unusual circumstance of appearing with unpainted, natural, light-colored skins, they have extraordinary yellow hair, very long and thick and always twined with green beads. The burlesqued countenance, distorted with anguish, is a usual captive feature, and the deformed skull again suggests a Maya. It is difficult however, to reconcile all of these physical qualities with a member of that race. The painter, in depicting the hair and skin with such care in order to contrast them with their black-painted armed captors, evidently had some notion of a distinct physical difference in his two sets of actors."

The artist's preservation of a race of light-skinned, fair-haired men is not the only interesting fact; the whole scene in which these strange people are involved is most remarkable (*Ibid.*, p. 398): "Upon the surface of the waves, a lively scene of combat was taking place between conventionally garbed black-skinned warriors and a red people with long, flowing, yellow hair. The scattered stones from the fallen portions of the section give additional details of this battle. The aquatic part of the picture would seem to have extended...from the southeast corner of the front room, two-thirds of the distance toward the central doorway. The final third, lying to the left of the marine section, contained one of the most interesting frescoes in the entire temple—that of the formal consummation of a human sacrifice. The victim is one of the yellow-haired people, and this leads to the rather obvious conclusion that the scene is directly linked with the one adjacent, where the same folk are manifestly suffering defeat in battle."

About the two parts depicting combat we read (*Ibid.*, p. 398, 402): "However this may be, the fair-haired folk are certainly suffering reverses in battle. One is being grasped by the hair and his face is fittingly distorted by unpleasant emotion. Another has his arms

Reconstruction of sacrifice shown in Plate XXXI.
(From Morris, Charlot, and Morris 1931.)

Fragment showing one of the captives.
(From Morris, Charlot, and Morris 1931.)

bound rudely behind his back. A third is being dragged backward over the prow into a canoe." "The conquering tribe, on the other hand, is represented in two different positions—some in canoes and others advancing to the attack through water close to shore."

The authors conclude their discussion of the Caucasian-like race as follows (*Ibid.*, p.402): "It has been stated that a marine combat between black warriors and a fair-skinned, yellow-haired people was taking place. The latter type is altogether significant. Quite obviously the painter is stressing an acute dissimilarity between his own people and those of another sort. The long, flowing, yellow hair, interwoven with green beads, so painstakingly delineated in the scene as well as in that of the human sacrifice, is undoubtedly meant to emphasize a difference of tribe, or even of race. I suspect that this device was stressed by the artist because the nudity of the figures precluded the use of details of dress as a distinguishing feature. There is but one exception to this absence of vesture; it is to be found in the unique yellow-brimmed hat, apparently made of woven straw, which crowns a head of yellow hair. Just what this unusual disparity of type may mean is purely a matter of conjecture, but it can not help but bring to mind legends rife throughout the American continent concerning the fair skin and golden hair of a mythical race. If the picture is a historical record, speculation would become even more interesting."

Victims as possible migrants

We know that the light and bearded Viracochas and their Inca successors added artificial ear-extension to the natural human garb. We need only look at the Chitzen Itza murals discussed above (Pl. XXIX), to note that the captors as well as captives were most decidedly "long-ears". This is a clue of some importance. In Peru, the pecular custom of ear-stretching was attributed to Viracocha, and was peculiar to his subjects, until later adopted as the privilege of the Inca of royal blood and his ten ayllus. Since both captors and captives in the ancient Chitzen Itza mural paintings are "long-ears", it would seem that there the custom was generally spread, and that both the fair and the dark race had been under the same cultural influence. In other words, only if the different sections of the murals are descriptive of different historical phases in the life cycle of the fair men is their arrival by sea at all likely to illustrate their *first* appearance in the locality. If all scenes are part of one single event, however, it would seem as if we were here dealing with a civil war between racially distinct members of the same general culture.

Both alternatives seem to deserve attention. To perceive the possibility of a "civil war" among people including a tribe with fair elements, we need merely recall with Brinton (1882, p. 161) the trouble at Chitzen Itza between Kukulcan's own "brothers":

"To bring Kukulcan into closer relations with other American hero-gods we must turn to the locality where he was especially worshiped, to the traditions of the ancient and opulent city of Chichen Itza, whose ruins still rank among the most imposing in the peninsula. The fragments of its chronicles, as preserved to us in the Books of Chilan Balam and by Bishop Landa, tell us that its site was first settled by four bands who came from the four cardinal points and were ruled over by four brothers. These brothers chose no wives, but lived chastely and ruled rightously, until at a certain time one died or departed, and two began to act unjustly and were put to death. The one remaining was Kukulcan. He appeased the strife which his brothers' acts had aroused, directed the minds of the people to the arts of peace, and caused to be built various important structures. After he had completed his work in Chichen Itza, he founded and named the great city of Mayapan, destined to be the capital of the confederacy of the Mayas. In it was built a temple in his honor, and named for him, as there was one in Chichen Itza. These were unlike others in Yucatan, having circular walls and four doors, directed, presumably, toward the four cardinal points. In gratifying confirmation of the legend, travelers do actually find in Mayapan and Chichen Itza, and nowhere else in Yucatan, the ruins of two circular temples with doors opening toward the cardinal points."

If we look at the yellow hair of the captive in Plate XXXII, there is little to indicate that the captor is pulling at "personified light rays", nor are the coiffure and whiskers of the maltreated prisoner on the fragment reproduced on page 289 a result of solar symbolism. (See another almost identical whiskered prisoner in the rear of the procession in Plate XXIX.) The bearded roof-supporting god-men carved on the pilasters outside this temple, and the golden-haired prisoners painted in the multicoloured murals within its sacred enclosures, disprove the irresponsible suggestions that the conceptions of such Caucasian-like men were only encouraged by the advent of the Spaniards; and they

confirm the importance of such seemingly un-American features having occurred to the mind of the early sculptors and painters of the temple.

It may seem at first bewildering that supporters of a religion whose culture-heroes are Kukulcan and his light and bearded followers should depict the golden-haired men of their sacred history so humbled as to be on their way to the altar of human sacrifice, yet we need go no further than into our own churches to find that their decorative and symbolic art is focussed upon the crucifixion and death of the founder of this Church. It would be fully in keeping with human nature if religious heroes were first sacrificed, executed, or driven away, and later honoured with worship. Quetzalcoatl, Zume, and Viracocha, were all in trouble with the ancestors of the present natives, and yet were worshipped by them all after their departure. White and bearded men, upon their local extermination, became the culture heroes of Peru, yet a group of them massacred to the last man while still on Titicaca Island. One of the sacred white Tonapas was murdered by the ancestors of the Andean tribes which later reverenged the name Tonapa as being that of the highest mangod and creator. Even in the lowlands of northern Peru, where the last Tonapa or the last Viracocha descended to the coast before the final departure, we find artistic reproductions of dark-painted (brown) victors with white prisoners remarkably suggestive of those rendered in the frescoes at Chitzen Itza. (Compare Plate XXIX and Plate LXXXI **4**.)

Worship, persecution, and worship are a natural sequence in aboriginal America as elsewhere. Racial friction and jealousy would overshadow the former feeling of respect, as aboriginal tribes rose in prosperity and cultural standing around an immigrant hierarchy. As the years or centuries passed, the enlightened pupils would soon lose faith in the divinity of their alien masters, and uproar and unrest would urge the latter to withdraw, seeking safety and renewed veneration and power among less informed and more credulous subjects. Once departed, their teachings and benefits, and the blunders of their successors, would gradually restore their former position as the divine and benevolent culture-bearers of the past, their departure would be deeply regretted by the people and their church, and would form the basic element in their religion and historic memories.

A Caucasian-like people depicted throughout prehistoric Mexico

Leaving Yucatan, we encounter further portraits of bearded models whether we take the road through the Tabasco jungle and Vera Cruz northwest to the Mexican highlands, or the Central American road through the plateaux of Guatemala en route to Salvador and the south.

In the Tabasco jungle, where Votan was remembered to have passed from the east with his Tzequil followers, we find that prehistoric artists left behind such portraits as that shown on Plate XVII. (For detail see Plate XXII **3**.) This full-bearded figure in low relief was discovered on a large pre-Columbian stela excavated by the National Geographic Society-Smithsonian Institution Archaeological Expedition to Southern Mexico of 1939-40. Stirling (1940, p. 327), in a report on the discovery, describes the profile as belonging to a "remarkably handsome individual with an aristocratic aquiline nose and a curious long, flowing beard." The figure shows a realism and a masterly design and execution which speaks for itself.

Further west, in the Mexican Gulf at Vera Cruz, where Quetzalcoatl was first remembered as arriving in a strange winged ship, and last remembered as departing on a supernatural raft of serpents, we find interesting support for the historical tradition in the portrait of the aristocratic and beautiful bearded individual reproduced, by the courtesy of the American Museum of Natural History, in Plate XX **2**. This ancient Totonac portrait, carved on the back of a slate mirror from Vera Cruz, is an outstanding piece of aboriginal art, and the taste and composition shown by the artist, as well as the aristocratic and almost intellectual profile of the bearded model, evince that we are once again confronted with vestiges of something more than the average American Indian as known to us in historic time.

The clay head found in Tres Zapotes, Vera Cruz, by the National Geographic Society-Smithsonian Institution expedition, and reproduced with their permission in Plate XX **1** of present volume, has been described as "one of the best examples of ceramic art yet found in the New World". (Aldana, s.a.) When compared to the profile carved on the Vera Cruz slate mirror, its anthropologic implications are enhanced. Such a vividly presented race type is not product of the artists' fancy.

From Vera Cruz we ascend to the Mexico Valley. Again we find the legend of historic time expressed in the art of prehistoric stone sculptors. The Vischer Collection of the Basle Museum includes an early sculpture of a seated deity from the Mexico Valley (see Plate XXII **1**), and Dietschy (1941, p. 86) identifies the statue as an image of Quetzalcoatl.

We are now approaching the northern limit of this prehistoric art representation and its concurring myths, and this limit also marks the termination in this direction of the true American high-cultures, as defined by Krickeberg (1934, p. 314). (See map p. 294.)

Bearded portraits from Guerrero to Salvador and Coclé

Following the trend of the same culture-myth from Yucatan southwards through the Isthmus, we remember how a corresponding personality appeared in the vicinity of Coban and Chama, but later left in anger to search a nobler people than his unappreciative subjects in Guatemala. The oral tradition does not specify that the wanderer was bearded, but local archaeology supplies information on this point. Dieseldorff (1894, p. 374) describes a strongly bearded priest on a Chama vase found exactly where the culture hero (Xbalanque) was remembered to have entered the region, and Seler (1895, p. 307) tries to identify the figure, with its beard, strongly beaked nose, long stick and fan, with the corresponding Mexican drawings of the wandering Quetzalcoatl.

Presenting the drawings reproduced on next page, Seler (*Ibid.*, p. 311) says: "...to the illustrations taken from Codex Mendoza, I add a further example... which is borrowed from the Mixtec Codice Colombino (Codex Dorenberg), and which deals with a being of more mythical nature. Persons engaged in wandering are undoubtedly depicted here also, having a staff in the right hand, perhaps signifying a lance and perhaps a walking stick, with a fan in the other. But the first of the persons is here the most famous of the Mexican gods, Quetzalcouatl, god of the winds and the hero of the myths of Tollan. It does not seem altogether improbable to me that this group represents the *wanderers* of the Toltecs under the leadership of their god Quetzalcouatl."

Mexican wanderers. (From Seler 1895.)

The fact that prehistoric artists working on Chama pottery have striven to represent the meeting of two distinct physical types of their aboriginal days, has also been pointed out and stressed by Vaillant (1931, p. 248). In an article entitled "A Bearded Mystery", the author takes up the problem presented by the seemingly non-American bearded physiognomies represented in native American art, from the vicinity of Mexico City to Chiapas and Guatemala. Vaillant centres his attention around the remarkable bearded clay head of Rio Balsas, reproduced by the courtesy of American Museum of Natural History in Plate XVIII. This piece of outstanding realistic portraiture is no more symbolic or imaginative than are the Caucasian-like profiles and masks from Tabasco and Vera Cruz. Discovered at Rio Balsas, on the Pacific slopes of Guerrero in southwestern Mexico, this clay head cannot but recall Capt. Cook's description of the Caucasian-like element which had found its way out to the Marquesas Islands, the nearest inhabitable island stronghold off these coasts of tropic America. Cook (1777, Vol. 1, p. 308) wrote: "They observe different modes in trimming the beard, which is, in general, long. Some part it, and tie it in two bunches under the chin; others plait it; some wear it loose; and others quite short."[1]

Having shown that the Rio Balsas clay head actually is the work of an indigenous artist of pre-Columbian times, Vaillant (1931, p. 247) adds: "We are left in the perplexing position of having the same physical traits portrayed by artists of several different tribal groups, who have evidently recognized a people different from themselves."

Drawing a parallel in Guatemala, Vaillant says (*Ibid.*, p. 248): "... from Chama in Central Guatemala comes a very remarkable Maya vase, painted in colours to show a ceremony involving seven characters. ... There is no doubt that the painter of that Maya vase was striving to reproduce two physical types, his own and another; and the foreigners are of the same group as the head from the Rio Balsas. The scene seems to resolve itself

[1] Fleurian (see Linton 1923, p. 420), too, wrote from the same islands: "Those who wear their beards full length, and these are the greatest number, arrange them in different ways. The commonest is to part the beard in two tufts, shaving or plucking the chin, and letting the beard grow on either side. Many others let it all grow and separate it into locks, which they plait, ..." And Beechey (1831, p. 138) from the discovery of the Mangarevans: "...the nose in general is aquiline; ...the mustachios grow long, but the beards, which are kept from three to four inches in length, are sometimes brought to a point, at others divided into two; one man, however, was observed with a beard which hung down to the pit of the stomach."

Distribution of American high-cultures.
(After Krickeberg 1934.)

Relief figure on stela from Tres Zapotes.
(From Stirling 1943.)

into the reception by a Maya chief and his court of a stranger whose attendant kneels before him while a Maya gentleman-in-waiting makes the sign of peace after the completion of the introduction of the two rulers. Thus the vase gives strong indication that a people existed of whom the little bearded figure from the Balsas is likewise a reproduction."

Archaeology thus shows that the tradition of the bearded wanderer, as told to the early Spaniards, embodied pre-European conceptions, depicted in still earlier descriptive art right across Mexico from Guerrero to Yucatan, from the Mexico Valley and northern Vera Cruz to Chiapas, and thence into the present republic of Guatemala. This vast but coherent geographical area may be extended even further southward on the Pacific side. Lehmann (1924, p. 39) shows that bearded figures are frequently found in the pottery-ware of Salvador. They are either rare or absent in Nicaragua and Costa Rica, but seem to reappear on the Panama Isthmus, where they are mentioned by Verrill (1929, p. 81, 138). He says of a stone monument at Coclé: "One human figure is represented with one hand stroking a long chin-beard which is strikingly reminiscent of an Assyrian figure." The same author (*Ibid.*, pp. 264-266), familiar also with Tiahuanaco, claimed that certain aspects of the megalithic ruins there are "most strikingly like the similar monuments found at the ruined temple site at Coclé in Panama."

As we shall see, there are both bearded portraits and megalithic cult sites on the Pacific slopes which geographically unite Coclé with distant Tiahuanaco. Throughout the extent of present Peru, from the north coast to the southern inland, pre-Inca artists have in one art-style or the other sculptures or moulded faces of a bearded model who seems to have occupied their minds especially along the itinerary assigned by the later Inca to the migrating Viracochas.

Pre-Inca statues of bearded men at Lake Titicaca

Stone head from Guatemala.
(From Krickeberg 1950.)

We recall from the legends of the Viracochas that their first activity at Tiahuanaco was to carve human busts of stone, formed as models for the respective tribes and peoples which their divine leader was to create among the preexisting mountain tribes. When they were finished, he had them moved to other places, whereupon he 'created a community' also in Tiahuanaco by carving similar models in stone. It is interesting therefore that the Tiahuanaco artists actually left in their own megalithic site and in its vicinity a number of stone busts, many of which have been preserved to our day, among them a few which depict a bearded race.

The nearest shore to Titicaca Island is that of the great peninsula of Copacabana, projecting almost the whole width of the lake between the island and the southern plains where Tiahuanaco is located. This peninsula would be the most natural landing-place for the Titicaca islanders on a push to the mainland. Moreover, ruins in the Tiahuanaco style, and a considerable number of stone busts of Tiahuanaco workmanship, have been identified on the peninsula. In the Mocachi zone, on the south side of the peninsula facing Tiahuanaco, Casanova (1942, p. 338) describes an area with worked stones from prehistoric constructions, fragments of great stone statues, and scattered stone tools, covering an area much greater than that actually inhabited by the natives. In its centre are preserved a number of great stone blocks up to 8 feet high, marking the outlines of a 'Kalasasaya', or House of the Sun, smaller than—but very similar to—that principal building of Tiahuanaco.

As clearly shown by Casanova, it is obvious that this megalithic cult site corresponds to the culture of Tiahuanaco, and probably even to its earliest period. Scattered about on the ground, and partly buried, are fragments of carvings of men and animals, all spread in utmost disorder and evincing that religious persecution rather than time was the principal agent of destruction. Among a pile of rough stones and fragments of statues a few yards from the temple, a monolith was discovered which was almost totally buried but for its anthropomorphic face. The carving was 0.80 metres high, and the head, occupying almost half its height, had a scarcely perceptible line carved around its upper part to indicate the existence of a fillet or head-wear. Casanova's description (*Ibid.*, p. 341) is of special interest: "The countenance is large with eyes and nose scarcely marked, a big mouth with thick lips and a strong and prominent little beard [*barbilla fuerte y prominente*] which rests

on the breast. The body is rounded and presents at the level of the waist a relief which seems to represent a belt or girdle, and from there the statue terminates abruptly, without signs of lower extremities."

The arms of the statue are carved in relief in such a way that the elbows are bent and the hands placed on the breast, Casanova concludes (*Ibid.*): "This monolith presents characteristics which distinguish the stylistic group dominant in Tiahuanaco... What is outstanding about this idol is its realistic aspects, the curves replacing the angles, the special attention which is lent to the head and hands, the amplification of certain traits such as the cheek-bones and the beard which are very prominent, ..."

Among the best preserved of the many mutilated and shattered stone statues of the Mocachi site is another monolith which Casanova (*Ibid.*, p. 342) describes as even more interesting. This ancient sculpture was still so profoundly respected by the present inhabitants of pure and indigenous race that they showed both fear and hostility when it was approached by outside visitors. Like the figure just described, it represents a Viracocha-like individual with a beard. (See ill. page 298.)

It was carved from one quadrangular block of reddish sand-stone, six feet eight inches high. All four sides were carved with figures in relief, one bearded individual on the front and another on the back, surrounded by snakes. Casanova (*Ibid.*, p. 345) writes:

"The front surface shows the most important representation: a man with a large head with a head-dress resembling a turban which continues over all the upper part of the monolith. The face of the idol has rounded eyes, large nose, and huge mouth with thick lips. The small but prominent beard rests on the breast.

"The body follows the rigid forms designated in conformation with the stone. The right arm rests on the chest, and the hand, with five fingers, is placed over the heart. The left hand is placed over the abdomen touching with the extended fingers a depression which it has on the right side. The legs are not represented, perhaps because a long tunic covers them. And on this vestment is encountered the most interesting figure seen on the lower part of the monolith. Over a sort of a neck or haft terminating in two lateral spirals, a head rises resembling the one described, but much rounder in form and displaying the peculiarity of dissolving into tongues."

Casanova (*Ibid.*, p. 347) points to the striking resemblance even in minor details between this sculpture from the Copacabana peninsula and a monolith excavated by Bennett from the ruins of Tiahuanaco, a resemblance which may well be appreciated by comparing the illustrations reproduced on page 298 and page 299. The Tiahuanaco origin of the Copacabana stone statue has been generally accepted as manifest. (Steward 1946, p. 135.) This naturally suggests that the Copacabana figures belong to the group of stone statues described in Inca traditions as once raised by the Viracochas of Tiahuanaco in this vicinity. At any rate the details on these particular statues concur in a remarkable way with the legendary aspects of Viracocha and his kin, as described orally to the Spaniards by the early Incas: the fillet-like headwear, the beard, the long vestment reaching to the feet, the girdle, all traits assigned to them by the early Peruvians. And the detached and rounded head ornamenting the lower part of the vestment of the major figure no doubt represents his ancestor, the sun, with its flickering flames and its spiral symbols.

Here we have the best possible criterion of the distinction between the celestial sun and

his earthly representative, the Viracocha. The latter has all the aspect and garb of a human priest, ceremonially ornamented with the symbol of the divinity he serves and represents. The long-robed bearded man wears the symbol of this celestial divinity in the ornamental form of a flickering ball equipped with two symbolic spirals rather than body and limbs, and humanized only to the extent that it has been given a human visage to show its relationship to man, and the outlines of a moustache to leave no doubt as to which breed of man it is related.

The horned serpent carved on the side of the bearded statue reappears in an almost identical form on the corresponding bearded monolith of Tiahuanaco (see ill. page 299), and this gives us another clue of no small importance. The bearded Quetzalcoatl and Kukulcan of Mexico and Yucatan are also intimately connected with snake symbols both in their names and in their symbolic representations. The *horned* serpent is in Mexico the direct symbol of the day sky, whereas the *plumed* serpent is the symbol of the night sky.[1] As shown by Dietschy (1941, p. 88), this same strange symbol of the heavens was shared by the early high cultures both of Mexico and Yucatan. From the latter area he writes: "The horned serpent as symbol for the heavens occurs already in the 'Old Empire' of the Mayas and among the early Tzapotecs, today even among the Pueblo Indians to the north. Its head appears on the head-band of the sun-god on the frescoes and reliefs of the Naua-buildings of Chichen Itza and in the paintings of Palace I of Mitla. In Codex Borgia it is also head-ornament for *Tonatiuh*, as well as for *Tonacatecutli*, *Quetzalcouatl*, *Cinteotl* and *Xochipilli*, . . ."

We shall shortly see that the horned serpent was the specific ideogram for heaven and appeared as head-ornament on the sun-god and high royalty also among some of the principal pre-Inca culture-spreaders in Peru. When so highly specialized a symbol for the heavens is shared by the early artists who depicted the bearded men of Mexico and Yucatan, and reappear on a bearded statue at Mocachi and another at Tiahuanaco, we have ample reason to suspect the possibility of a source connection between the ideograms of the roving artists. And since the horned serpent ornamented supreme Mexican gods and culture-heroes like *Tonaca*-tecutli (Chief *Tonaca*) and Quetzalcoatl, its Peruvian counterpart may well ornament the corresponding local chief *Tonapa*, alias Viracocha.

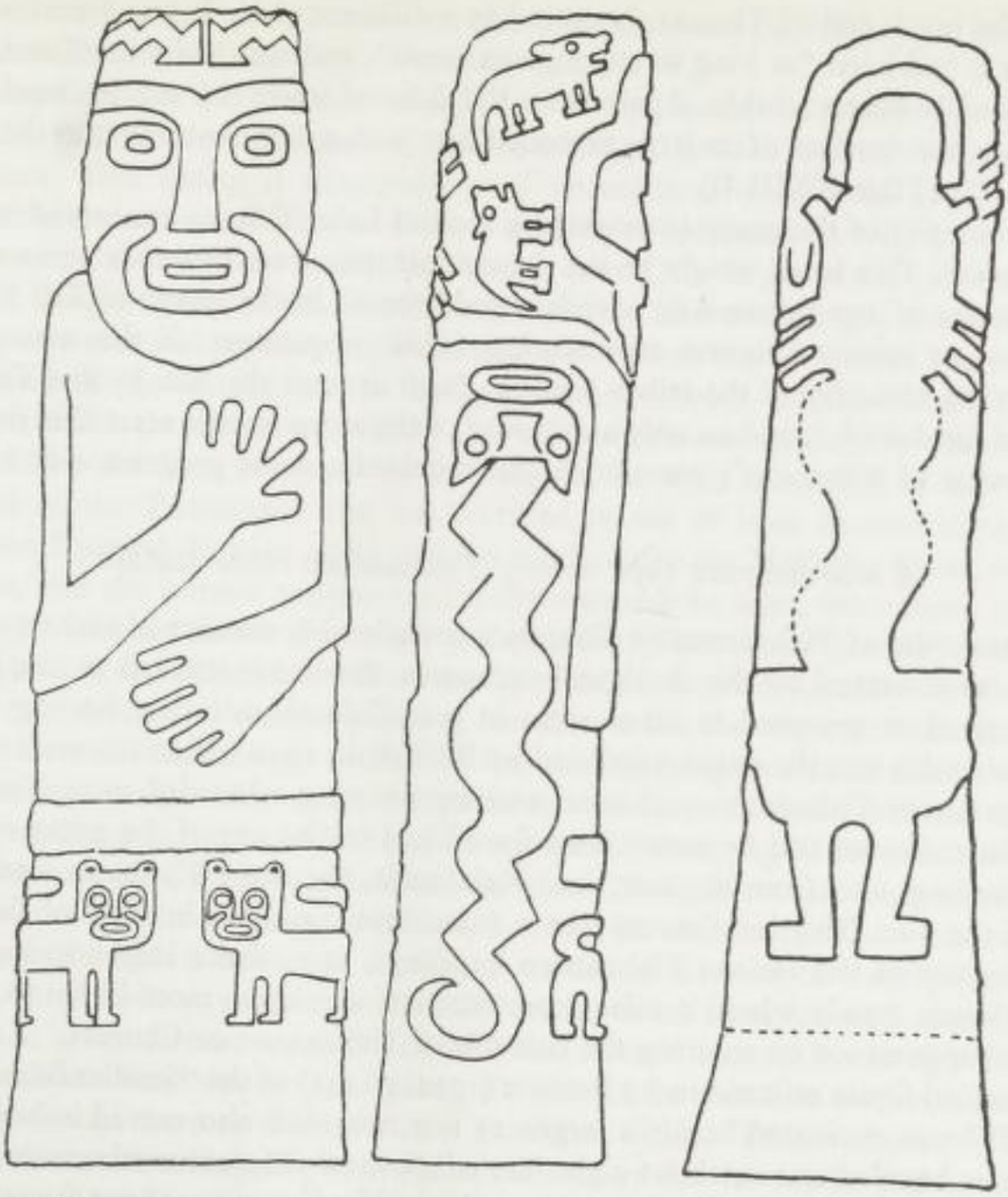
At the most ancient level some 10-12 feet below the surface, Casanova (1942 p. 354) found in his excavation at the Mocachi site a single anthropomorphic representation, a fragment of a human head in reddish coloured clay. He says (*Ibid.*, p. 363; italics by T. H.) "This piece must form part of a vase; in spite of its reduced dimensions *one may appreciate the small beard*, the mouth, part of the eyes, and the nose with its nostrils on the upper part of which there are four small holes of uncertain significance, perhaps serving to fasten an ornament." As will be seen later, Bennett (1950) also mentions that some of the Mocachi ceramic heads have representations of scraggy beards on the chin.

Pre-Inca sites with stone statues in human form have been found in several other localities around Lake Titicaca, as at Pukara (Valcárcel 1935 b), Hilavi (Arriaga 1910, p. 53), Huari (Wegner 1934, p. 164), Arapa, Taraca, Conima, etc. (Kidder 1943), and many more figures were badly mutilated if not totally destroyed by religious fanatics of post-

[1] The plumed serpent, symbol of the *night sky*, is termed Quetzalcoatl, a proof in itself that Quetzalcoatl cannot be a personification of a "light-ray" or the sun.

Front, back, and side view of monolith from Mocachi. (From Casanova 1942.)

Same monolith redrawn from photograph by Casanova. (From Steward 1946.)



"Front, Side, and Back View of Smaller Bearded Statue of Pit VII [Tiahuanaco]. The front view shows the curled up beard and the lightning rays on the forehead, both of which are connected by a raised band on the side." Back of statue is badly defaced by erosion. (From Bennett 1934.)

Columbian times. There is an apparent resemblance between the statues of Hilavi and Mocachi, and in Huari and Taraco there are two stone statues which, down to the detail of the beard, are so remarkably like the bearded monolith from Mocachi already described, and its bearded prototype at the actual Tiahuanaco site, that all four obviously must have derived from the same stylistic inspiration, if not from the hands of the same artist. Where the bearded Mocachi statue has the head of the sun with flickering flames carved in low relief at the base of the mantle, the one at Huari has, similarly placed in low relief, a cross-shaped and perforated ideogram. Local tradition tells that while the other ancient monuments at the Huari site were destroyed, this one was saved from destruction by the early friars because they observed the 'cross' on its front and back. (Wegner *loc. cit.*)

The bearded stone statue discovered by Kidder (1943, p. 19) on Arapa Island in Lake

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Arapa, at the north end of Titicaca, is carved in a different style. It was found in a farmyard where it had been "as long as anyone can recall", and was badly mutilated, but the flowing beard is clearly visible. Apart from the defaced traces of trophy heads carried by the figure, the vestiges of its large extended ears with a circular nugget in the lobe are still visible. (See Plate XXIII **1**.)

Only a minority of the many stone statues around Lake Titicaca are carved with long robe and beard. This lends weight to the theory that they were probably never carved as idols or images of any supreme or invisible god, nor all in the image of Tici Viracocha himself, but as ancestral figures representing tribal progenitors. If this assumption is correct, only a minority of the tribes brought forth around the lake by the Tiahuanaco creator and his disciples, and so only a minority of the stone statues erected in the vicinity by them, were of Viracocha's own stock and required a stone progenitor in his image.

A bearded race type among Tiahuanaco stone statues

At the early site of Tiahuanaco or Chucara a considerable number of anthropomorphic monoliths were carved by the aboriginal occupants. Some are still left *in situ*, but many were destroyed or removed to other areas in post-Columbian times. Among the more recent discoveries was the statue excavated by Bennett in 1932 within the walls of a small semi-subterranean Tiahuanaco enclosure, and representing a bearded man. (See Frontispiece.) The enclosure and its statue were found just to the *east* of the great monolithic stairway leading, also from the east, into Kalasasaya, the main Tiahuanaco temple and House of the Sun. This location may be a coincidence, and yet in view of the religion and the lay-out of the various Tiahuanaco buildings, one cannot help noticing that the small enclosure stands where a solar representative would be most likely to make his ceremonial appearance on entering the cult-site of Tiahuanaco or Chucara.

The bearded figure referred to by Bennett (1934, p. 441) as the "Smaller Bearded Statue of Pit VII" was excavated beside a larger 25 feet monolith also carved in human form. The smaller bearded statue, about eight feet tall, was of different workmanship from its giant neighbour, and cruder. Bennett was emphatic, like Casanova, about the resemblance between the bearded Mocachi and Tiahuanaco carvings. He describes the Mocachi statue (*Ibid.*, p. 482), as "almost identical to the small bearded statue of Pit VII, with beard, spread hands, and serpent figure on the sides." Like its counterpart at Mocachi, the Tiahuanaco monolith was carved from a selected reddish sandstone, secured and transported from a distance.

The head of the long-robed and girdled figure on the statue was described by Bennett (*Ibid.*, p. 441) as follows: "Two lightning rays meet in triangular points on the forehead of the statue and continue down the sides of the head, joining the bar of the T-shaped nose, and running into the beard which surrounds the mouth. This beard, in high relief, curls up on each side of the mouth and forms a point on the chin."

While the corresponding bearded statue at Mocachi wears a long robe with a solar emblem decorating its lower half, the Tiahuanaco figure is correspondingly ornamented in the same place with two *pumas*, the familiar Tiahuanaco symbol connected with Viracocha and divinity. The stylistic whiskers of the pumas are represented by the same lines as on

the face of the bearded man, but for his pointed chin beard (which is even more marked on the statue than on the drawing. Casanova 1942, Pl. IV.)

Bennett points out that the enclosure in which the bearded statue was found probably belonged to the Decadent Tiahuanaco period, to judge from the style of ceramic fragments found there. This dating is admittedly very uncertain if transferred to the monoliths found within the same enclosure, as there is nothing to indicate a stylistic or chronological unity between the two items. In fact, as Bennett shows, the larger of the two statues wears an incised design clearly of Classic Tiahuanaco style, and accordingly antedates the surrounding ceramics and possibly even the enclosure where it was found. The smaller and cruder statue of the bearded man is hardly contemporaneous with its Classic Tiahuanaco neighbour, and it therefore seems likely that it is either a creation of the decadent period shortly before the Inca conquest of this region, or else, like much of the remaining stonework of the Tiahuanaco site, has survived *in situ* or been re-used since the early Tiahuanaco I period. In view of its striking similarity to the Mocachi, Huari, and Taraco monoliths, and the horned serpent motive ornamenting its sides, there seems to be much in favour of an early rather than a late and decadent Tiahuanaco period for this statue.

The lightning flashes on the head of the figure are undoubtedly merely a symbol of light and heavenly descent.[1] Posnansky (1913) has shown the step-sign in Tiahuanaco art to symbolize heaven in relation to earth. Yet the two lightning flashes on the forehead form an independent design only when the statue is seen from in front, whence the human figure is presented in high relief. There is apparently more significance in the lightning flashes when we look at the figure from the side. The sides of the same monument are entirely without anthropomorphic details, but are devoted to plainly symbolic designs, the purpose of which is obviously to replace writing in an effort to convey further information about the person represented in relief on the front. Together with animal symbols on each side of the column we find a raised band, formed directly by the lightning flashes which run down from the forehead along the side of the statue to send one branch into the eyebrows and another down into the beard (see figure). To me, this is just about the only way an artist working in plastic art could convey that his model had light-coloured hair, eyebrows, and beard. He could, of course, select a reddish stone material for the carving, which was also done, but this would give the whole statue the same ruddy colour.

We shall see later that a number of loose stone heads have been found among the cut stones of the ruined constructions at Tiahuanaco. They have no connection with the statues, as they seem to have been carved separately, more or less for ornamental purposes, and were probably attached to the cut-stone masonry of the walls. Posnansky (1914, p. 87) says of these heads: "Many of them show a fillet-like headwear resembling a turban, and a strongly projecting under-jaw, stretched out in the length, which it is likely may indicate a bearded chin."

Rivero and Tschudi (1851, p. 295), followed by Inwards (1884, p. 25), also speak of a 3 ½ ft. stone-head with a strange cylindrical cap and stylished beard, found on the road from Tiahuanaco to La Paz.

[1] Since the snake-symbol is the direct ideogram of light and sun-rays among high-cultures both in Mexico and Peru, the triangular point of the rays in question may possibly represent serpents heads, since these are occasionally stylised in a very similar manner in early Peruvian art.

We cannot, of course, generalize from the Tiahuanaco tradition and say that all stone statues on the Titicaca plateau were raised by a hierarchy as ancestor figures for tribes in that locality. We have already seen in Tiahuanaco that stone-carvings, including the anthropomorphic statues, belong at least to two different periods. Yet, again, the same or a similar magic trick might have been repeated more than once.

We know, however, of Peruvian statues intended for other purposes, and carved subsequent to Tiahuanaco times. Thus the post-Tiahuanaco Indians of Cacha, south of Cuzco and on the main Inca road from Titicaca, raised a stone statue solely in veneration of the particular Tici Viracocha who passed through their land on his final departure from Tiahuanaco to the Pacific coast. Similar images of the departing Tiahuanaco ruler were also dedicated to his worship at Tambo de Urcos and Cuzco, important stopping-places on his final route, but whereas the images in the latter places were of gold and were therefore melted at once and valued solely in pesos by the arriving Spaniards, the one at Cacha was of stone and survived long enough to leave us a description of the venerated person it represented. From Garcilasso de la Vega (1609 b, p. 70) we learn that this statue of Viracocha was discovered, raised on a great pedestal, inside an Inca temple built of cut stone: "The image represented a man of good stature, with a long beard measuring more than a *palmo*,[1] in a wide loose robe like a cassock, reaching to the feet."

The early Spaniards were astonished to find among the 'barbarous' and beardless Indians an image with such a striking resemblance to their own Old World saints and Apostles. The apparently Caucasoid aspect of the person depicted made a great impression upon the newcomers, and even had religious consequences affecting to some extent the otherwise hostile attitude of the Spanish missionaries towards the local Viracocha beliefs. According to Cieza (1553-60, Part I, Chap. 97) some of the Spaniards came to the conclusion that the Viracocha statue represented not a heathen idol, but one of the Apostles who must have come to Peru before the days of Columbus. Indeed, Garcilasso (1609 b, p. 71) says:

"The Spaniards, after seeing this temple and the statue with the form that has been described, wanted to make out that St. Bartholomew might have travelled as far as Peru to preach to the Gentiles, and that the Indians had made this statue in memory of the event."

The Spanish-Indian mestizos of Cuzco even went as far as to form a brotherhood adopting St. Bartholomew, as embodied in this ancient statue, as their guardian, and religious friction arose: "The temple was then destroyed, first one part being thrown down, then another until the whole was in ruins. The statue of stone continued to exist for some years, though disfigured by the stones that had been hurled against it." Karsten (1938, p. 200) points out that the bearded statue of Viracocha was carried away by the Indians and hidden for some time near Cuzco, but it was rediscovered by a pious Spanish iconoclast who caused it to be destroyed.

There is little reason to suppose that the contemporary images of Viracocha in pure gold on the hill at Tambo de Urcos and at Cuzco differed much in aspect from that carved in stone at Cacha, since all depicted the same pan-Peruvian culture-hero as worshipped through centuries by the same Andean people. Art treasures of gold all went quickly into the melting-pot of the early Conquistadores, and few would stop to marvel at any outward

[1] One palmo is about 9 inches.

resemblance to saints. But *Relacion Anónyma* (1615, p. 148), as quoted by Brinton (1882), speaks of a now destroyed marble statue of Illa Ticci Viracocha in the great Cuzco temple later chosen for the Cathedral. This statue is described as being, "both as to the hair, complexion, features, rainment and sandals, just as painters represent the Apostle, Saint Bartholomew." And we do not have to proceed very much further north along Viracocha's Andean road of departure before we find more vestiges of him and his followers in some of the most realistic portraiture ever left for posterity by prehistoric artists. These are the anthropomorphic pottery jars of northwestern Peru.

Caucasian-like race-type with flowing beards on Early Chimu effigy jars

Inca tradition maintains that Tici Viracocha followed the highland road from the Titicaca plateau to Cajamarca before he descended to the coast. At Huamachuco on this road, just before entering Cajamarca, we encounter again prehistoric clay models of a strongly bearded and Caucasian-like race-type. (Seler 1893, Pl. 26, fig. 21.) And when we descend, by the shortest passage from the Huamachuco-Cajamarca area to the Chicama Valley and the coast, we enter the heart of the area in which the bearded pottery portraits are distributed.

It has been a great drawback to our understanding of early Peruvian history that none of the many important events before the rise of the Inca dynasty and the arrival of the Spaniards were described and preserved for posterity in a written language. We are apt to forget, however, that there are still certain details which no combination of words, no author, can describe with the accuracy of representive art. In a recent paper, Kutscher (1950) stresses most emphatically the point, made already by Squier in the nineteenth century, that iconographic studies, especially of the realistic pictorial representations in the Early Chimu ceramics, provide an excellent means of reconstructing the past of the early prehistoric civilization on the Pacific coast of North Peru. He says (*Ibid.*, p. 196):

"The easiest approach, of course, is found in the effigy vessels, which quite correctly are considered to be in the first row of ancient American art. They may also be regarded as anthropological specimens which yield a great deal of information. First of all, they tell us about the physical type of these people in a most naturalistic and sincere way. A comparison shows that this early civilization was built up out of a mixture of at least three different racial types. The physical appearance of the Early Chimu is therefore better known to us than that of most other Indian tribes."

Also (*Ibid.*, p. 202): "If at some time it becomes possible to reconstruct partly the highly interesting civilization of the Early Chimu, and so to understand the basic principles of this culture, it will be thanks to those unknown and nameless artists who created these ceramics more than a thousand years ago. The monument which they have erected for themselves and for their people is not *aere perennius* but was created with the simple tools of potters, who were artists and, in some way, anthropologists at the same time."

Among the thousands of Early Chimu pottery portraits one extraordinary racial type is readily distinguishable from all the rest, concurring entirely with the Caucasian-like type under discussion. (See Plates XXVI and XXVII.) In very many cases it is decipted wearing a long and flowing beard, most realistically moulded and painted. These portraits

strikingly recall the similarly deviating race type depicted in the bearded reliefs and moulded clay heads in early Mexico. (Se Plates XXIII **2-4**, XXIV, and XXV.)

Early effigy jars depicting this bearded model from the Chicama-Trujillo area of North Peru are spread through private and museum collections in most parts of the world, and vary mainly in the ornamental pattern of the cloak, headwear and ear-plugs of the person depicted. Common to all is the strange fillet or turban-like headwear, the long vestment with legs covered or omitted, ears extended by enormous plugs, a prominent well-bridged, aquiline nose, and a long and flowing white-painted or dark-striped beard. The model or models seen by the Early Chimu potters agree in every respect with the peculiarities, remembered throughout the Inca kingdom, of the Viracocha of Tiahuanaco who descended to this area.

It may be argued that perhaps some of the early Indians themselves had a strong growth of beard and a Caucasoid aspect as shown in these aboriginal Chimu portraits. But that is all I actually want to demonstrate. We are not looking for pre-Columbian Europeans in Peru. All that Polynesianists are looking for is a nearby Pacific area whence migrants resembling the *Caucasoid type* might formerly have had a ready and natural access to Polynesia. There is strong opposition from many quarters to the suggestion that America can ever have contained such a race before Columbus, and my object in the present volume is merely to meet this view with available evidence. Whether the deviating American racial type in question can possibly have developed in Meso-America from the norm of the Yellow-brown race, or whether, like the Yellow-brown stock, it represents an independent immigrant strain, has no direct bearing on the question on hand; what matters is whether or not such a Caucasian-like race type can have existed among the aborigines in coastal Peru, to the windward of Polynesia, in the pre-Inca centuries of early Polynesian migrations.

As stated, Lehmann (1924, p. 39), points out how the bearded ceramic figures of Salvador, in Central America, reappear on the coast of North Peru; and Leicht (1944, p. 289), in his work on Chimu art and culture, finds it remarkable that the beardless Indians of the Chimu area, at the peak of their early prehistoric culture, modelled and painted certain figures with such remarkably long beards. The same author points out the interesting analogy between the arrival and departure of bearded culture-heroes in Mexico and the discovery in the early capital of the Cimu nation of corresponding portraits.

It is also worthy of notice that at Lambayeque, on the Peruvian coast north of the area of the bearded effigy jars, a closely related form of bearded pottery head is found, (see Plate XXIII **5**) somewhat less realistic, and with the typical puma-teeth symbols characteristic of the anthropomorphic monoliths both in the San Augustín culture of southern Colombia and the Chavín culture of northern highland Peru. It is interesting that Lambayeque, as will be seen later, is the home of a tradition describing the arrival of coastal craft from the north.

The modelling of the bearded, cloaked and turbanned individuals continued to some extent also in the Late Chimu period. (See Plate XXV **4**.)

Cultural instability of the Chimu area

We know that the *earliest* inhabitants of Peru, at their archaic cultural stage, must have arrived by degrees as land or coastal migrants from North America, through Mexico,

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1 Bearded profile in low relief, Chitzen Itza, Yucatan. (Photo: *T. S. Ferguson.*) **2** Stone statue of culture hero from Oaxaca, Mexico. (Collection *Musée de l'Homme, Paris.*)

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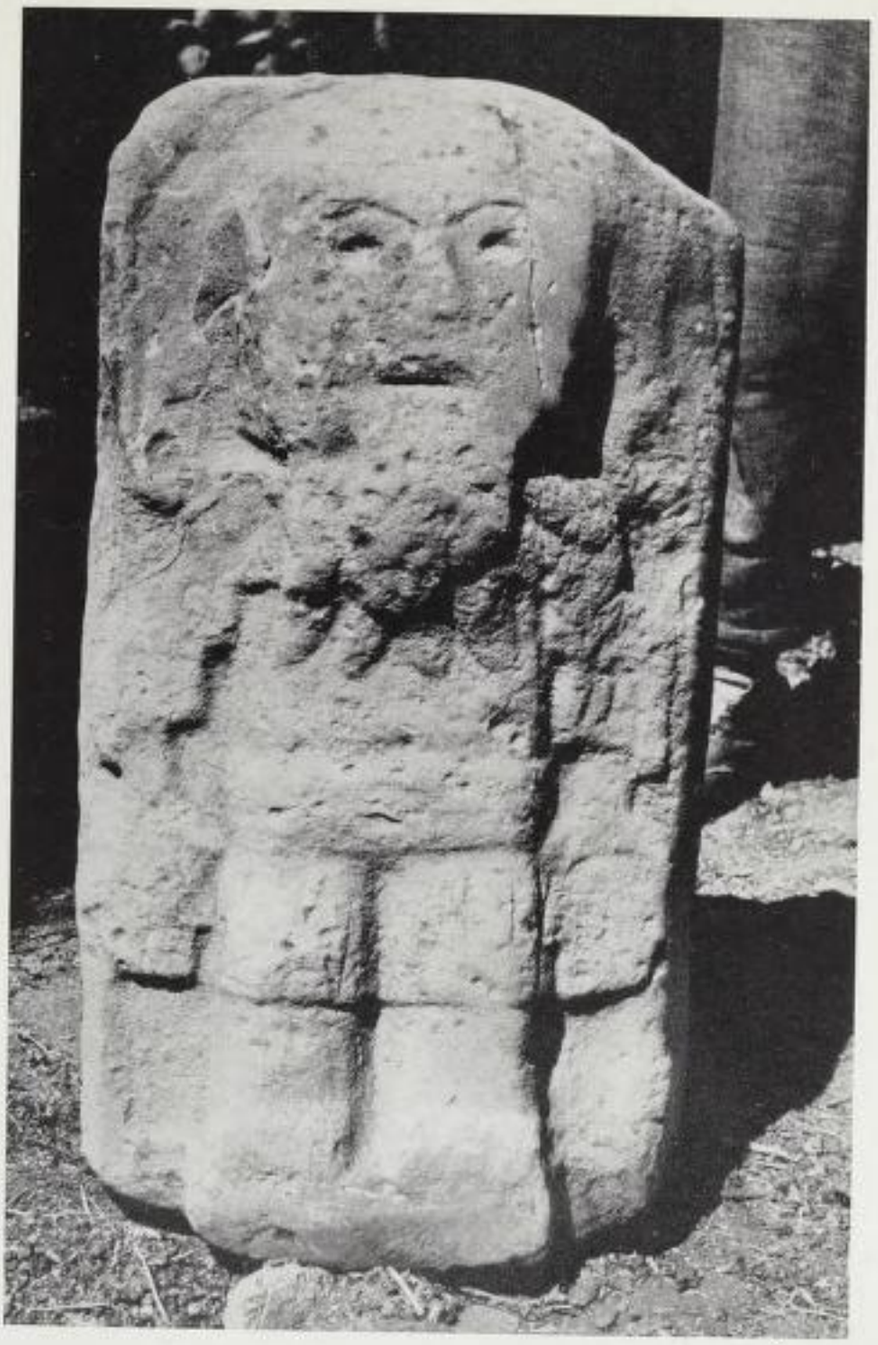
Plate XXII

1 Ancient Aztec representation of the bearded Mexican culturehero Quetzalcoatl. (From *Dietschy 1941.*) **2** Maya priest at worship, relief from Tabasco, S. Mexico. (Photo: *Amer. Mus. Nat. Hist.*) **3** Detail of the bearded racetype in plate XVII, Tabasco, Mexico. **4** Jade head from Oaxaca, Mexico. (Collection *Musée de l'Homme.*)

Plate XXIII

1 Statue of bearded man with large perforated ears (badly defaced) from Arapa Island, Titicaca basin, Peru. (Photo: *Peabody Mus., Harvard Univ.*) **2** Realistic Early Chimu pottery portrait from Huaca de la Cruz grave, North Peru (from *Bennett 1939*), and **3, 4** from archæological sites at Moche (from *Kroeber 1925*). **5** Conventionalized form from Lambayeque, also North Peru, with feline emblem and puma teeth symbolizing divinity. (Photo: *A. H. Verrill.*)



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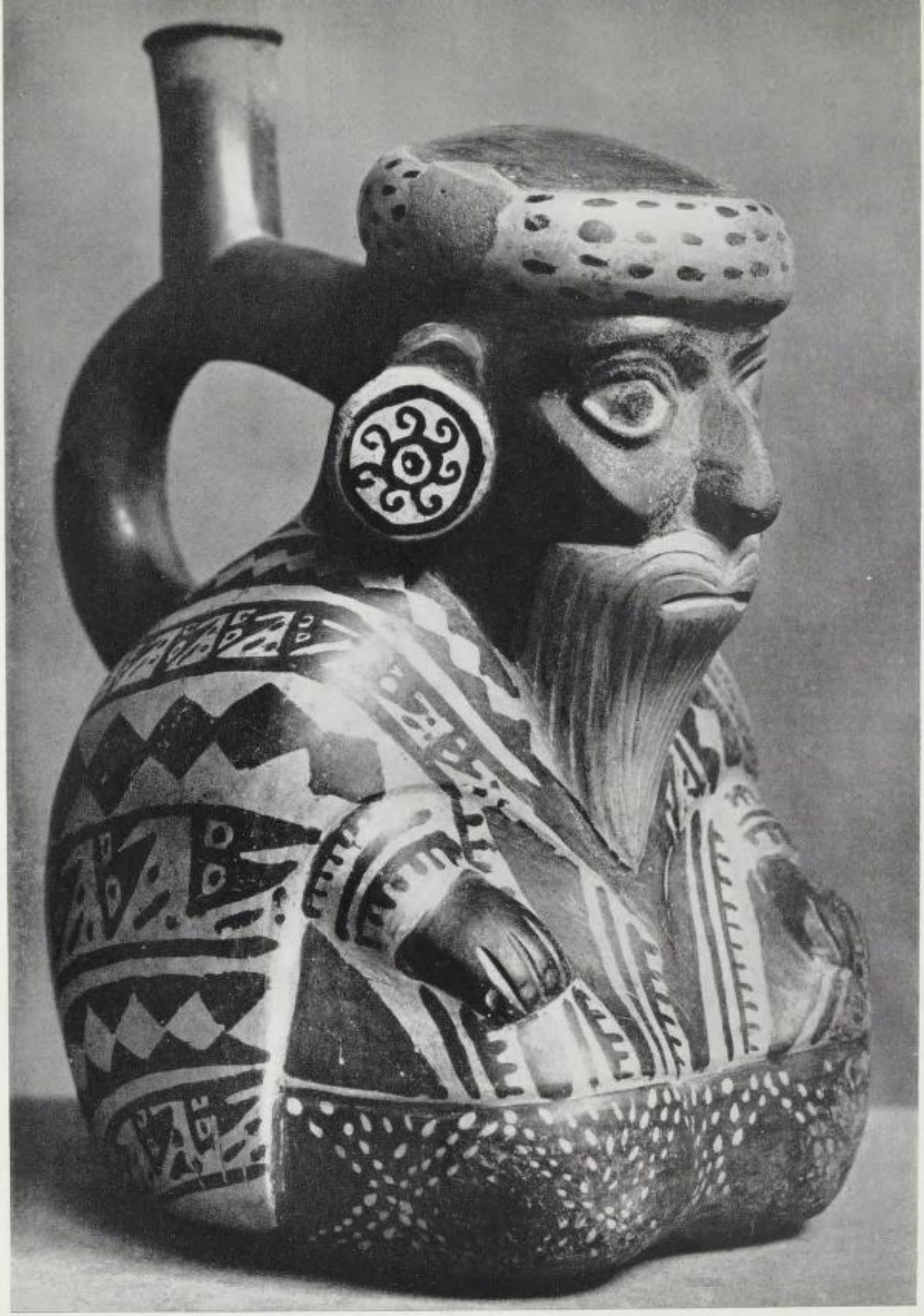

Early Chimu pottery jar of bearded man, from the Chicama Valley, North Peru. (Photo: Mus. f. Völkerkunde, Berlin.) Peruvian traditions speak of a foreign race of bearded men who came to Peru to institute culture, before they finally left across the Pacific, long before Inca time. Their leader, referred to as Tici in the highland and Con on the coast, became the venerated culture hero of the vast Inca Empire.

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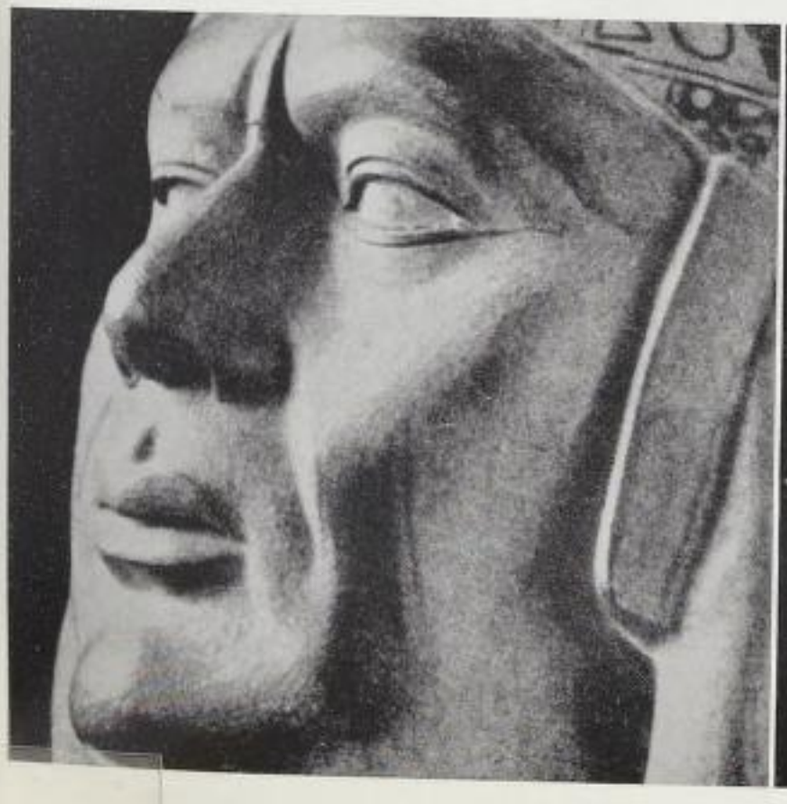
"Bearded men" from the Chimu area of Pacific North Peru. **1, 2, 3** were modelled during the Early Chimu period, in the first half millenium A. D. or earlier. **4** is from the subsequent Late Chimu period. (Photos: 1 *Ethnographical Mus., Gothenburg*; 2 *Lehmann 1924*; 3 *Amer. Mus. Nat. Hist.*; 4 *A. H. Verrill and Brooklyn Mus. N. Y.*)

Physical types of an extinct people. (From *Leicht 1944.*) The Early Chimu high-culture is renowned for its realistic pottery portraits in contrast to the conventionalized and symbolic art of most of Peru.
Although no such realistic portraiture was made in Tiahuanaco or on the South and Central Coast, the highland traditions claim that Tiahuanaco was built by a race of white and bearded men, for whom the first Europeans were mistaken; and on the coast are found mummies with European-like race-traits.

Early Chimu types. (From *Leicht 1944.*) The intelligent and determined physiognomies of these prehistoric chiefs testify what the remains of their culture show, that the Chimu Coast was occupied by men of creative strength and enterprise in the very centuries when Polynesia was first discovered. Pre-Inca Peru was the centre of activity for a variety of race-types, including a culture-bearing aristocracy with certain European-like characteristics.



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"Long-Ears" of Peru and Easter Island. Inca tradition refers to Tici as leader of a "large-eared" people, and state that when he left for the Pacific his last lesson to his subjects of Peru was how to extend their ears. **1** Modern savage of North Peru with plugs to enlarge his ears. (From *Testmann 1930.*) **2** Easter Islander with extended ears. (From *Cook 1777.*) **3, 4** Wooden Easter Island ancestral figure with extended ears and goatee beard. (From *Chauvet 1934.*) **5** Easter Island stone statues with long ears and pointed chin indicating beard. (From *Routledge 1919.*)

Central America, Colombia, and Ecuador. We know, too, that the same simple and natural expansive movement was followed by the better equipped Spaniards in a single generation. If we therefore assume that some of the nameless American bearers of high-culture of the vast intervening period might also have reached the Chimu area of North Peru by similar exploration, they would have been too late to discover and settle virgin Peruvian land, but could have brought along with them Mexican cultural principles and thus cause impulses which would stimulate great local activity and evolution among the existing archaic and indigenous cultures. As a race element they would come among the aborigines as a numerically rare but intellectually significant component, probably forming, much like the earliest Spaniards, a culture-bearing aristocracy or an outstanding social caste. We shall see how such a hypothesis matches known archaeological facts. Kroeber (1930 a, p. 108) in his important survey of the archaeology of the nuclear culture area of the North Peruvian coast, stresses, like many others, the absence of any local sign of gradual culture development. The earliest evidence of the classic Early Chimu high-culture appears archaeologically as already developed, "of well specialized type"; and, "As elsewhere in Peru, no trace has yet been discovered of beginnings." He shows that the Early Chimu is typical Peruvian in general character, "and any attempt to connect it with Ecuador, Central America, or Mexico can be valid only in so far as it also takes account of relations between other parts of Peru and those countries".

Kroeber (1925) also presents evidence to show that, at the ancient level where classic Early or Proto-Chimu high-culture suddenly appears, the bearded race-type was already found to be present on the beautiful effigy jars. Two realistically modelled and painted representations of a Caucasian-like race-type with sharp, narrow nose, big eyes, and a well-groomed beard falling down below the chest (see Plate XXIII **3** and **4**), were excavated among other art manifestations in an Early- or Proto-Chimu site right at the foot of the Pyramid of the Moon at Trujillo (Moche). Kroeber (*Ibid.*, p. 199) writes: "As to the antiquity of this ware, and its priority to any other yet found at Trujillo, there can be no reasonable doubt." Bennett (1939, p. 36), reproducing the effigy jar seen in Plate XXIII **2**, identifies it as grave ceramic of the Early Chimu style, and adds: "The face is distinctly modelled with deep inset eyes and black moustache."

As stated, a growing number of observers refute the extreme evolutionist hypothesis that aboriginal Americans of the inter-tropical zones remained immobile from the day their earliest ancestors settled their respective areas to begin their first steps toward true culture. Groups of high-culture peoples are also capable of movement, either through pressure or when tempted by trade or explorations. A sudden blossoming and later abandonment of comparatively homologous cultures, all on the verge of forming fully developed civilizations, present their geographical pattern as prehistoric stepping-stones in the unstimulating jungle area between Mexico and Peru. Such a culture pattern in this particular coherent area, some writers point out, would hardly have been possible had not the primitive local jungle-dwellers been temporarily visited and influenced by a more or less common cultured source.

Leicht (1944), too, discusses the old question of how high-culture arose on the early Pacific coast of North Peru. He shows that a fundamental cultural standing, based on Pacific fisheries and a certain degree of agriculture, had been acquired by the aboriginal

settlers long prior to the appearance of the Early Chimu high-culture. This is the conclusion to be drawn also from Bird's local excavations, and the Carbon 14-datings of these. To this statement Leicht adds the following interesting reasoning (*Ibid.*, p. 15):

"But there is no archaeological testimony to the effect that the subsequent culture of the Chimu grew gradually from that of the earliest inhabitants. On the contrary, even the earliest Chimu art is readily distinguishable from the finds which come down from the primeval inhabitants. Already in its most ancient state the early Chimu reveals distinct connections with the Central American culture, . . . There can hardly any longer remain reasonable doubt that the Chimu ancestors, possessing already a culture that had bypassed the archaic state, immigrated from the north roughly about the 2nd. or 3rd. century A. D. They may have passed the narrow Panama isthmus by land, in spite of the presence of savage forest-Indians with poisoned arrows, and, while continually following the river-banks, have slowly advanced over the highlands to the south, where the lateral valleys and the water led them once more out of the mountains to their subsequent dwelling-places along the coast.

"However, by far the greater number certainly arrived by way of the much simpler ocean route along the coast. We shall to-day have to put the timing of early mankind's boat-culture back to a much earlier period than has formerly been done. . . .

"One does not, have at once to turn fantastically to early Phoenician merchant fleets or to the South Seas to assume an immigration of culture-bringers by sea. The Chimu at the time of the discoveries still possessed several efficient sea-going craft, which excited the greatest astonishment among the Spaniards, and which were certainly no new invention, but had long been in the possession of the Indian population of the coast.

"Ruiz, Pizarro's brave and experienced pilot, had not come far down the coast on his voyage to explore Peru, when he was surprised by the sight of a peculiar Indian craft which appeared to him from the distance to be a caravel of considerable size on which a powerful sail was stretched out bellying in the wind. The old sailor was not a little astonished at the sight, as he was firmly convinced that no European ship had ever been in these latitudes before him. As he came nearer, he saw that it was a giant raft . . .

"This simple but effective type of construction was more than sufficient for navigation along the coast, and such *balsas*—on which there were straw-covered huts and accommodation—have served the natives for transportation along the coast and on the greater rivers even after the conquest of the land by the Spaniards."

Leicht (*Ibid.*, p. 18) also shows that, until the arrival of the Spaniards, the natives of the Chimu coast had maintained a firm and detailed tradition concerning the immigrant origin of one of the early local cultures. He refers to evidence collected by Miguel Cabello de Balboa, an intelligent and learned Jesuit of the middle of the sixteenth century:[1] "In times so old that nobody could express it any more, a great fleet of foreign Indian *balsas* appeared with many sails on the coast of the region of Lambayeque. The rafts came from the north and stopped at the mouth of the river Faquisllanga [Rio Chancay?]. A powerful monarch disembarked, accompanied by his wife, numerous secondary wives, and a host of people who faithfully and devotedly followed their emperor."

[1] A copy of Balboa's MS with original text is preserved in the New York Public Library and will be quoted in Part VIII.

We are given the names not only of the emperor and his wife (Naymlap and Ceterni), but also of some of the forty principal and selected men who formed the royal court, as well as the function of each of them, from the ceremonial conch-blower to the royal feather-dress maker and the master chef.

The party moved a short distance inland to build their first town, bringing great riches and strange properties never seen before in those parts, even a ready-made image carved in green stone representing their lord, which was raised in their first temple. A genealogy of eleven generations with named kings follows after the death of the immigrant emperor, and then the dynasty ended in superstition and riot when the last priest-king was suspected of causing a drought through his unsuccessful attempts to transport the green stone statue away from its original temple to another site. After the fall of this dynasty another era followed, and other tribes held power in the land before the Late Chimu and Inca periods.

Leicht (1944, p. 20) is the first to mention the interesting analogy and possible connection—direct or indirect—between this green stone image and the analogous six-foot so called "Raimondi monolith" of a culture-hero, carved in greenish diorite, which was discovered at Chavín de Huantar, a considerable journey inland. A direct cultural connection between the early Chavín and Chimu reigns is at least generally recognized, and will be discussed later.

Lehmann (1930, pp. 336, 337), too, maintains that there were reasons to suspect that "the Naymlap culture originated in Middle-America". He writes: "Balboa's account of Naymlap and his company and successors shows certain conformities with Toltec traditions. This has been pointed out by Krickeberg too... The Chot temple which Naymlap built is probably preserved in the stepped pyramid which lies about 4 kilometres from Eten and to the left of the road leading to Reque. It was about this pyramid that Middendorf early remarked that it most resembled the buildings in Central America and Mexico."

Leicht hardly intends to argue that Naymlap's fleet of balsa raft voyagers necessarily represented the arrival specifically of the Early Chimu dynasty, but rather that the coastal road lay wide open—and was probably repeatedly used—between the territories of the Central American peoples and the Pacific sea-coast of Colombia, Ecuador, and Peru. An immigrant fleet approaching Peru from Central America would naturally reach first what was to become the northern Chimu coast. This was in fact to remain the headquarters of Inca navigators and seafaring merchants right up to historic times. A principal reason for this was the easier access to balsa and other light timber in North Peru than, for instance, in Nazca territory. These practical considerations combine to give the Early Chimu and their local predecessors a key position for the coming and going of cultural impulses and culture-bearers to and from prehistoric Peru.

Inca history sends the Viracocha emigrants northwards from Tiahuanaco and down to the coast in the heart of the Chimu territory. This tradition would at a first glance make the Chimu area recipients from Tiahuanaco, as far as the reception of the bearded Viracochas and their culture were concerned. But, it will be recalled, the bearded hierarch of Tiahuanaco (if the legend is to be accepted literally) sent all but his nearest followers ahead of him with given itineraries and a rendezvous on the northern coast. The (two) remaining followers were directed to the same destination by way of the coastal and inland slopes respectively, independently of the route followed by Tici Viracocha. Thus

the area leading to the place must already have been fairly well known to the Viracochas, and it is thus possible that they selected for their own exit the same locality which had once served as an entry for their tribal ancestors: In that case, the Early Chimu area and the northern coast would in the first place represent a stepping-stone for the original spread of high-culture to Tiahuanaco, and later an exit for emigrants leaving their abandoned highland site en route for the coast of Ecuador.

It is interesting to note that the Chimu, according to Zarate (1555, Chap. X. p. 48), also preserved a distorted early myth antedating even the arrival of King Naymlap and his balsa raft fleet, according to which a supreme divinity, namely Con (Kon), had arrived from the north. He was their creator, the son of the sun and the moon, and could shorten or prolong the roads, and raise or flatten hills as he pleased. He gave the population newly created plants and fruits to eat, but as the Indians of the plain had caused him some trouble, he revenged himself by causing drought, which shrivelled up their lands and only permitted some drinking-water to descend in the streams from the highlands. In the end another powerful person, Pachacama, who also said he was creator and son of the sun and the moon, had arrived from the south. He was stronger and on his appearance Con fled the coast and left the people he had created without a leader and protector.

Tschudi (1891, p. 179) discusses the Con myths as told by several early chroniclers, and while showing that they originate in the Chimu area, observes that Pachacama in some cases was memorized as the son of Con. Further (*Ibid.*):

"Again, according to another tradition, Kon had not arrived alone, but together with companions. After he had given the people laws and had instructed them, he was supposed to have become dissatisfied because they did not obey, wherefore he set out along the coast for the province of Manta, and having spread out his mantle on the ocean, he had seated himself on it together with his companions and hence disappeared. This version of the Kon-myth in no way refers to Kon alone, but, as will be seen, is an amalgamation with the Viracocha-myth. Kon was originally esteemed independently of Viracocha."

Thus we see, as with the Quetzalcoatl of the Aztecs and the neighbouring Kukulcan of the Mayas, so also with the Viracocha of the Inca and the neighbouring Con of the Chimu: the itineraries and details pertaining to these culture-heroes and their activities are so consistent that adjoining nations, when fused together in subsequent cultural periods, recognize their own culture-hero in that of their neighbour and hence freely interchange his name. Thus the Tici of the Tiahuanaco hierarchy and the Con of the Chimu was freely referred to in the final Inca period of the pan-Peruvian Empire as Con-Tici, even with the descriptive Quechua suffix Viracocha—"Sea-Foam".

Conventionalism and symbolic art representations

We have seen that the *horned serpent* was the specific symbol of heaven among the early Zapotecs of Mexico as well as among the Mayas of the Old Empire, being placed as a symbolic ornament on the costumes of local priests and deities; and that it reappears carved in relief both on the Mocachi and the Tiahuanaco bearded statues on the Titicaca plateau. It even appears to a marked degree on the Tiahuanaco-inspired statues at Huancane. (Plate LII **5**, **6**; Rydén 1947, p. 91.) On the coast of North Peru we find the inter-

The symbol of the double-headed serpent. (From Kutscher 1950.)

Headwear of "the well-known bearded old men" in Chimu art. (From Montell 1929.)

mediate link. Horned serpent motives appear here with striking frequency on the headgear and costumes of deities and heroes depicted in symbolic art. The iconographic representation reproduced above after Kutscher (1950) leaves no doubt that the horned serpent directly represents heaven in the ideographic art of ancient North Peru also.[1]

To the knowledge of the present writer, no ideograms beyond step-signs, spirals, and modified swastica symbols are found on the purely realistic effigy jars portraying the bearded Early Chimu men, although markedly horned serpents are often painted as an ornament on the headwear of ceramic portraits of other aristocratic Early Chimu individuals of the same strangely Caucasoid type. (E. g. Plate XXVII.)

In Peru Viracocha was always remembered with a plain tonsure or band round his forehead; he was also carved thus in the highland monoliths, and the bearded Chimu effigy vessels were always so ornamented.

Studying prehistoric Chimu types of headgear through an analysis of the effigy jars, Montell (1929, p. 51) says: "In some vessels the head carries only a ring formed by spirally twisted cloth or yarn, ... This arrangement generally occurs uncombined with any other component of headgear, but is occasionally provided with two erect wings at the sides [see fig.]. Of the well-known bearded old men this is especially characteristic ..."

Describing a peculiar type of *horned headdress* from North Peru, Kroeber (1925, p. 220) says: "The proto-Chimu winged fillet of the bearded men may be a prototype, but it is lower and not a complete head covering."

These observations recall corresponding head ornaments which survived till historic times on the nearest island groups in Polynesia. Thus Stewart (1832, p. 161) wrote of the native headwear in the aboriginal Marquesas group: "Their turbans are of various shapes; the most common consists of a piece of native cloth, of the size of an ordinary pocket-hankerchief, bound closely to the head, having the ends twisted into a large knot imme-

[1] Kutscher (1950, p. 200) says: "As Doering has indicated, the Chimu, as well as the ancient Mexicans and Maya, symbolized the heavens as a double-headed monster." As the serpent symbolizes the sun-ray, we may well presume that the arched body of the snake, as seen above, represents the arched path of the sun across the sky, with a head at each extremity symbolizing its termination at sun-rise and sun-set. The horn, often taking a directly triangular form, or sometimes the shape of a pointed and erect ear, is not so readily interpreted, and therefore hardly independently invented.

diately in front, or on one side over the temple. The ends of others are longer, and formed into large puffs or cockades on the tops or sides." Also Linton (1923, p. 419) cites early visitors to the Marquesas: "When the hair was dressed with two knots the centre and back of the head was shaved, the tapa wrapped knots protruding like horns from the bare skull."

Robertson (1766—68, p. 228) wrote on the discovery of Tahiti: "...there was one Venerable old Man in one of this canoes, that all the rest paid a particular respect too, he was cloathd better nor the rest and Wore a White turbent about his head, and a pretty long gray beard,..." Robertson described this native as belonging to a local "Race of White people" having "a great resemblance to the Jews".

Describing the often strongly bearded race-type among the obviously mixed inhabitants of aboriginal Mangareva Island, Beechey (1831, p. 137) says: "... when their heads are covered with a roll of white cloth, a very common custom, they might pass for Moors. It is somewhat remarkable that we perceived none of the fourth class, or those more allied to negroes, thus habited, but that it seemed to be confined to those of the lightest complexion."

Beechey's description of these deviating Mangareva individuals, with their light complexion and the white cloth-roll round their heads, their growth of beard (which in one individual reached the pit of the stomach) and a nose which "in general is aquiline", strangely recalls the human type depicted on the Early Chimu effigy jars, and it is noteworthy that the water bearing down upon Mangareva comes constantly in a rapid current which arches directly down from the coast of what was the Early Chimu kingdom.

If we are to consider the possibility that a guiding influence behind the high-culture developing at Tiahuanaco had its roots further north, among the coastal Chimu and the highland Chavín, then it would be reasonable to suspect that these in turn had developed locally out of culture inspirations coming south from coastal Ecuador or inland Colombia (San Augustin), and these perhaps again from somewhere on the Isthmus, or from early Mexican culture centres. In this way an underlying relationship, limited to general and basic conceptions rather than distinctive details and tribal art-styles, may bind together the geographically coherent American area of high-culture and reverence for early men with light skin and beards.

Certain observers cannot consider it likely that there were other physical types present in early Peru than those which inhabit its villages of to-day. Since the present Aymara and Quechua Indians are a beardless people, they reject the idea that bearded men might have been known to the early Peruvian peoples. This way of stabilizing races to sites—which would lead to strange results if generally applied in anthropology—makes it necessary to propose that local traditions relating to beards are the results of native imagination, and that prehistoric portraits *depicting* beards are meant to depict something else. Thus Rydén (1949), stressing that the present Colla Indians around Tiahuanaco "are just as 'red' as are all other Indians and their growth of beard just as minimal", deduces that people in that locality cannot have been otherwise in times past. He thus finds it necessary to explain away the bearded pre-Inca portraits. With regard to the bearded statues of Mocachi and Tiahuanaco, he claims that the term "beard" after all is merely a convenient name, and "that which represents the beard might as well be a nose-ring".

This hypothesis is difficult to explain, seeing that the carved beards in question do not

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even touch the nose, and Rydén has to go outside Tiahuanaco to support his statement by a comparison with some of the coastal pottery jars. Instead of consulting the Early Chimu effigy jars, which represent early Peruvian portraits in a purely realistic style—and in which the beard cannot possibly be mistaken for a nose-ring—the author has recourse to the Nazca jars, which are known as the antithesis of Early Chimu pottery because they are not modelled in human form, but only painted with the highly conventionalized symbols and abstract stylistic patterns typical of Nazca art. Thus, while the realistic Chimu beards by their shape and colour could settle the problem without further discussion, the almost surrealistic Nazca beards may at first seem to drag the argument out indefinitely. Presenting the four figures reproduced above, Rydén (1950) shows that the first specimen actually is a Nazca face-ornament of gold, the three others being corresponding lines painted on Nazca ceramics. It could be added that this type of conventionalized Nazca conception is suspiciously common, not to say dominant, on the stylized faces depicted in their local art. (E.g. fig. **5**.)

It would indeed be natural to go further and ask: why is it so common? what does this strange outgrowth on the lower face symbolize to the Nazca artist? and why did the Nazca native select even for his own embellishment that strange golden face-ornament the purpose of which was to give himself the same appearance as the heroes symbolically represented in the potter's art? We know that to the Nazca artist each stylistic design, each zoomorphic limb or item, had more than an ornamental value; they invariably had a

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specific ideographic significance as well, the subject matter generally being selected from mythology.

It is not difficult to identify the facial attachment thus depicted by the Nazca artist, and it has been done most effectively. Lehmann (1924, p. 32, with Doering) in his art history of early Peru, illustrates the "Golden Mouth- and Nose-ornament" of the Nazca as reproduced in fig. **6**. Without commenting on the lower piece, he shows the upper ones to symbolize whiskers. This he deduces from the fact that feline heads in Early Nazca art are depicted with such whiskers in rather naturalistic form, developing later into a more

stylised and independent design identical with the fan-shaped side-wise face-projections under consideration. Now, if the upper pieces are whiskers, the wide lower band that goes with it (fig. **6**), or is attached to it (fig. **1**), can hardly symbolize anything but a beard.

When Rydén selected the conventionalized Nazca motive reproduced in fig. **2** above to illustrate his case for a "nose-ring", he possibly did not know that Leicht (1944, p. 316), six years earlier, had already reproduced the full design shown in fig. **7**, and that he had then identified the supposed "nose-ring" as the typical and exceedingly common Nazca symbol for the "cat-demon" or the sacred puma-face. The "nose-ring" was simply the stylized "whiskers" of the cat. The puma whiskers, and indeed the entire feline symbol, are well known as intimately associated with the creator-god and the Viracocha worship in all parts of early Peru.

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As may be judged from the whiskered cat ideogram in question, when reproduced in full, Nazca symbolic art is indeed less dependable as a guide to the judging of human

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race-types in prehistoric Peru than is the naturalistic art of the Early Chimu further north on the same coast.

As already stated, when the whisker design as identified from the pottery paintings is worn independently by the natives as a human face ornament or golden mask, the whiskers are completed by the additional chin piece, which thus can only represent the remaining Viracocha feature missing from the whiskered puma: the beard. The golden beard and whiskers of fig. **6**, worn as a face mask by the beardless Nazca, are both ornamented with snake-heads at the extremities, the symbol of light and of the sun-god. The Nazca sun-god was *Pacha-Camac*, closely associated with the Chimu *Con*, the Tiahuanaco *Tici*, and the Inca *Viracocha* cycle. The extremely stylized mask of fig. **4** has included even the eyebrows in the coherent pattern of facial hair. So had also the bearded Tiahuanaco statue when seen from the side. This was the observation which encouraged Rydén to suggest that the bearded Tiahuanaco statue was meant to depict a man with a beard-like Nazca "nose-ring" rather than a real Chimu beard. Since, however, the Nazca "nose-ornament" actually is to be interpreted as a "beard-ornament", then the circle is again closed.

In fig. **8** is reproduced the head of a Nazca effigy jar in Musée de l'Homme, Paris, where the stylished beard of a human head is moulded in free dimensions, leaving no doubt as to its signification. Again, the two Nazca heads reproduced in fig. **9** and fig. **10**, where moustache and beard are painted in unmistakeable and simple lines, belong to the type of Nazca ware which is somewhat more realistically painted. The eyebrows and moustaches in the one case (fig. **9**) are both represented in exactly the same way.

Somatological evidence

Diversity in local cranial forms

The burial remains of prehistoric Peru provide us with a number of mummified bodies and a vast quantity of local Indian skulls for our consideration. The skulls will represent the population at large, whereas the mummies—at least where artificial mummification is involved—may give us a wrong average of the population as a whole, as they may principally preserve for us members of the upper social classes important enough to be honoured with this form of burial. But this possible selectivity should not exclude the elements for which we are searching.

As is well known from the numerous prehistoric skulls analysed throughout Peru, the cranial indices do not follow the brachycephalic norm of the Yellow-brown race. Peruvian skulls are heterogeneous in type, and although brachycephaly is dominant among the Indians of historic times, dolicocephaly was common in many parts of Peru in early prehistoric times. Provided that cranial indices are at all a dependable means of judging race or physical types, we find then that the early local inhabitants are either—like the Polynesians—of mixed origin, or else have, locally or inside the Americas, evolved into subgroups, some of which diverge widely from the general cranial norm of the Yellow-brown race. Therefore, we do not necessarily have to suspect a Melanesian element in the Polynesian dolicocephalic component like that which is particularly noticeable in Easter Island, furthest from Melanesia and nearest the South American shore.

In his "Metric Study of Undeformed Indian Crania from Peru", Newman (1943, p. 42) shows that in general the highland crania are more long-headed, the coastal ones more short-headed, with index variations roughly from 75 to 84. He says: "Speculation as to the origins and relationships of the one coastal and two highland physical types is idle until more data are available." Since the short-headed form dominating the coast concurs with the Yellow-brown or Mongoloid norm, it is interesting to find that long-heads existed right in their midst during the Early Chimu period. Kroeber (1944, p. 56), like Uhle, Larcos, and others, points out that the majority of undeformed Early Chimu skulls are *long*.

If we go straight to Tiahuanaco, we find within this limited Andean site that prehistoric people with entirely diverging head-forms have been buried there side by side. Chervin (1908, p. 139), in the craniological volume of his *Bolivian Anthropology*, presents a table of cranial indices from Tiahuanaco, showing that they range from 71.97 to 93.79. This covers the whole scale of human head forms between dolichocephaly and ultra-brachycephaly,[1] a variation which is too marked to make it reasonable to suppose that one homogeneous tribe has inhabited this site throughout its era of habitation. Two rather extreme cranial forms within the Tiahuanaco-dominated area are reproduced in Plate LXXXV **5** and **6**, both pertaining to aboriginal natives of the Bolivian highland plains south of Titicaca. The series to the right represents a long-headed and narrow-faced cranium of great antiquity, excavated from an early grave on the actual Tiahuanaco site. Neither artificial head deformation nor individual index freedom among relatives of one homogeneous tribe can fully explain such thoroughgoing differences in head-form.

It is true that head flattening was formerly very common in these regions, and even circular cranial deformation (*deformatio fronto-sincipito-parietalis*, Gosse 1861) which is less easily detected than simple head-flattening. But furrows in the skull caused by tight bandaging, as well as a bulging of the intervening sections, generally betray artificially deformed skulls and prevent their entry into index tables as undeformed specimens. Since neither of the two most extreme head-forms of Tiahuanaco can be produced merely by artificial modification of the other, at least not without obvious traces of deformation, we should have to assume that some intermediate form was natural, and was occasionally lengthened and occasionally shortened. But since the purpose was to acquire the tribal ideal of beautiful or aristocratic head-form, it is hardly conceivable that members of one community strove for *opposite* results unless they wanted to stress some racial distinction between them. Certain it is that the frequent occurrence of artificially deformed heads cannot explain away the existence of a marked difference in natural head-forms in early Tiahuanaco. Here, as among the Early Chimu, a long-headed type has lived among short-headed people of the Yellow-brown norm.

Occurrence of Caucasoid hair on local mummies

Fortunately we are not restricted to the analysis of cranial form in our determination of a racial complexity in early Peru. As well is known there is a considerable number of more

[1] 70–75 dolichocephaly; 75–80 mesocephaly; 80–85 brachycephaly; 85–90 hyper-brachycephaly; 90–95 ultra-brachycephaly.

or less well preserved mummies. Some of these have been deliberately embalmed (Dawson 1928; Candela 1943; Stewart 1943; etc.), while the majority seem to have been preserved by the favourable conditions of burial in dry desert sand as in many of the great necropolises typical of the Peruvian coast.

Already in the latter half of the last century, the Peruvian mummy-heads collected by Blake, Hutchinson and others startled European anthropologists by including physical elements thought to be alien to the Mongoloid or Yellow-brown aborigines of early America. Busk (1873, p. 313), while quoting a previous remark by Blake that the colour and texture of the hair on certain Peruvian mummies indicate essential differences from that of known Indians, said himself of a selection of Peruvian mummy heads presented by Hutchinson to the Anthropological Institute: "The hair which is so abundant upon many of the crania on the table is, as will be observed, by no means coarse, but rather fine and silky—nor is it truly black, but rather of an auburn tint, . . ."

Busk suggests that the hair might possibly have been black originally and had only changed its colour *post mortem* through exposure in the sand. But since the proposed bleaching effect of the sand cannot account also for the remarkably non-Mongoloid texture of the hair, he admits that the fineness may be an argument in favour of those who suspect a different type of man from the coarse-haired Indian otherwise dominating early America. The hypothesis of the bleaching effect of the sand on the hair of all brown-haired Peruvian mummies is reasonable, but not conclusive. Nevertheless it has not been seriously tested, but has been accepted as plausible to account for the same sort of local discoveries until recent times, merely because there has not been any other reason to suspect the existence of non-Mongoloid elements in this locality, until here, when the search for the origin of the non-Mongoloid element in early Polynesia is focused on pre-Inca Peru.

Apart from the Caucasoid silkiness of the otherwise auburn hair referred to above, there are two other frequently occurring arguments against the conclusiveness of the sand-bleaching hypothesis. Firstly, we should expect that all local mummies of corresponding antiquity would acquire the same auburn hair when buried in an identical manner; secondly, the theory would at least require that the hair of the mummies under discussion should actually have been exposed in sand. In the light of available evidence none of these conditions are satisfied in Peru. Among ancient Peruvian mummies deposited under the same conditions, some have the blue-black hair of the Mongol, others the light brown and auburn hair otherwise characteristic of the Caucasian race.

When describing the brown, soft, and wavy hair on some of these South American mummies, Wilson (1862, p. 235) already contrasts them with specimens found by him in Indian graves elsewhere: "In all these the hair retains its black colour and coarse texture, unchanged alike by time and inhumation; . . . In this respect, therefore, the disclosures of the ancient Peruvian cemeteries of Atacama reveal important variations from one of the most persistent and universal characteristics of the modern American races; nor is their evidence less conclusive as to the essential diversity in cranial conformation."

No less important is the fact that countless Peruvian mummies have been discovered, not buried in the sand, but in stone-walled and roofed burial vaults, or even in roomy burial caves like those at the Paracas peninsula. The hair of these has not been exposed to the sand at all, nor even to the light. Some of these mummies, which, furthermore, have been

closely covered by unfaded and brilliantly-coloured blankets and hoods, have still revealed a soft brownish hair when the hood has been lifted.

These circumstances combine to show that it is at least dangerous to argue from the mummy-finds that none of the prehistoric peoples in Peru had brownish hair. When the ideal conditions of a dry cave burial leave wool and cotton tapestry and mummy-covers in their original and brilliant colours, and yet the mummies inside occasionally have brownish hair, then the conclusion is that a *post mortem* fading must have effected the well-protected hair but not its covering,—a rather unlikely happening.

Suppose that formerly living people represented by the present mummy-bundles in Peru actually had included individuals with fine brown hair, the sweeping assumption that all brown hair among these mummies must have faded from an original bluish-black would remove all possibility of identifying them. The only way of securing conclusive evidence, in our day, that some of them had brownish hair, would be if some thoughtful aboriginal had taken hair-samples of some black-haired and of some brown-haired individuals, tied each up separately with string and deposited them all together in one basket and in one burial vault, where all remained together under exactly the same conditions until opened by the anthropologist in modern times. There would then be two possibilities:

a) The modern discoverer of the basket would find only brown hair samples. In that case he could not safely deduce anything, since the black samples might possibly have turned brown in the basket.

b) He would find some black hair-samples together with the brown ones. In that case he would know that the brown ones were natural and not faded, or else there would have been no black samples in the basket.

Strangely enough, this particular experiment has been carried out in detail: The early American superstition as to the magical properties of human hair (Luomala 1940, p. 49), which is so marked also among the Polynesians (Buck 1922, p. 40), impelled some early native of Chacota Bay, on the Pacific coast below Tiahuanaco, to place a whole selection of hair-clippings from different relatives in the grave of a small but well equipped family. The grave, described by Wilson (1862, Vol. II, p. 228; italics by T. H.), contains the mummies of a man, a woman and a child, evidently persons of some distinction. Together with their still bright-coloured personal belongings and some food and coca-leaves there are also some bags of finely woven texture, all in a perfect state of preservation. In these are "locks of human hair, each secured by a string tied with a peculiar knot. All the hair is of fine texture, of various shades, *from fine light brown to black*, and to all appearance has undergone no change. ... In this family tomb, in which lay the parents with their infant child, we may assume with little hesitation that we have the locks of hair of the surviving relatives: in all probabilities of elder members of the same family as the infant interred here in its mother's grave."

Here the discovery of black and fine light brown hair-locks each secured by a string and placed in the same bag is a perfect example of alternative (b), i.e. that the locks of fine light brown hair cannot merely be faded, or the black locks would not have been present among them.

About the infant itself we further learn that its scalp "is thickly covered with very fine dark brown hair." And (*Ibid.*, p. 228): "The male mummy is that of a man in the maturity

of life, in the usual sitting position with the knees drawn up to the chin. ... The hair has undergone little or no change, and differs essentially from that most characteristic feature of the Indian of the northern continent. It is brown in colour, and as fine in texture as the most delicate Anglo-Saxon's hair. It is neatly braided and arranged, the front locks being formed each into a roll on the side of the head, while the hair behind is plaited into a triangular knot of six braids. The garments and wrappings of this mummy were of fine texture, woven in woollen materials of diverse colours; and the head-dress was first an oblong hood with particoloured stripes, and over this a cap formed of woollen threads of various colours, ingeniously woven, and surmounted by feathers and an ornament formed of the quills of the condor. ... The body of the female from the same tomb presents in general similar characteristics. The hair is shorter, and somewhat coarser, but fine when compared with that of the northern Indians. It is of a light brown colour, smooth, and neatly braided across the upper part of the forehead, then carried backward and secured on each side of the head."

This little family seems to be of high cultural and social standing to judge from dress and ornament, and in all probability of somewhat mixed descent, to judge from the different hair-samples of ancestors or relatives which were placed in their grave.

Wilson (*Ibid.*, p. 246) strengthens the evidence of the hair-samples from this Chocota family grave by describing another discovery amidst the grave-finds in the same neighbourhood. This second find was an embalmed mummy-head:

"The head was found detached, and carefully preserved without the body. It appears to have been prepared by desiccation, without the use of resins or other antiseptics, and was enveloped in a thick cotton bag. ... It is unique, so far as the observations of its finder extend, and presents some striking points of dissimilarity to any of the crania already described. ... The forehead is broad and high, the nose prominent, the cheek-bones strongly developed, the alveolar edges of the jaws obtusely arched in front, and the incisor teeth stand in a vertical position. The hair which is brown, and slightly grey, is remarkably fine, waved in short undulations, with a tendency to curl. ... The orifices of the ears are filled with tufts of cotton, and the same are passed through slits in the lobuli. Mr. Blake suggests that this might have been the head of some noted curaca or chief of a hostile country taken in battle, and preserved as a trophy; but Dr. Morton refers to the practice of the natives at Port Mulgrave on the Northwest Coast, as well as those of other tribes, of decapitating their dead chiefs, and preserving their heads apart. The same singular custom prevails in the Ladrone and Society Islands, as well as in others of the South Sea Islands, from which it may be inferred that it was not the head of an enemy, but of a person of distinction."

A mutual deviation in head shape between these Chocota Bay finds seems to stress further the existence of local raceblending, although some artificial index modification also seemed probable to Wilson. But the important aspect of these discoveries is that, amidst an aboriginal population known to us as typically coarse-haired, straight-haired and black-haired, some prehistoric mummies have been interred including race-elements with a hair-texture as fine as "the most delicate Anglo-Saxon's hair". We even hear of instances where such remarkably fine hair is "waved in short undulations, with a tendency to curl", and occurs in various shades of brown, even "fine light brown" and "brown, and slightly grey".

Referring to the above-described mummies and the finding of the mixed hair-samples, Wilson himself pointed out (*Ibid.*, p. 232) that: "The colour and texture of the hair are facts of great importance to the ethnologist, as indicating essential differences from the modern Indians in one important respect; and therefore confirming the probability of equally important ethnic differences, suggested by other evidence." The author stressed in conclusion that discoveries such as mummies and bags with fine and silky brown hair on the coast of ancient Peru "go far to disprove the assumed unity of physical type throughout the Western Hemisphere. No feature of the modern Indian is more universal, or yields more slowly even to the effacing influence of hybridity than the long, coarse black hair..."

Only about ninety miles further south on the same coast, a most carefully preserved mummy of an adult woman is described by Dawson (1928, p. 127): "... it was carefully and elaborately embalmed. ... The whole body has been plastered abundantly with some gumlike resinous material mixed with oil of a strongly aromatic smell, and which is deliquescent." We further learn that: "The scalp retains abundant light-brown hair, which is parted in the centre and arranged in two long plaits which hang from above each ear."

We shall later see that supporting finds are made in the cave-burials at Paracas, while at Ancon on the Peruvian coast just north of Callao, Reiss and Stübel (1880—87, Pl. 16, 17) discovered a colourful bundle of beautiful and aristocratic cloth containing human bones, and ornamented by beautiful long and wavy human hair, brown in colour and fine in texture. Through the kind cooperation of Dr. R. Carión Cachot and Dr. L. F. Gálvez of Museo Nacional de Antropologia y Arqueologia in Lima, and of Dr. P. Pawlik of Instituto de Estudios Etnológicos, I have been able to reproduce here for the first time a photographic selection of mummy heads and hair-samples of non-Mongoloid type from prehistoric Peru. The specimens (illustrated in their natural colour in Plates XXXIV—XXXVI) were selected and photographed by the museum staff from some of the extensive and hitherto unpublished material of pre-Inca origin which is preserved in the museum store-rooms.

It may be surprising to find individuals with these non-Mongoloid hair characteristics among the graves of aboriginal Peru, yet it should not be more surprising than to find them among the live inhabitants of adjoining Polynesia. As we have seen in Part IV, the Mendaña expedition and other early European voyagers found sporadic individuals with brown and reddish-brown hair of fine texture, long and wavy, as they pushed with the aid of the trade winds from Peru into Polynesia and adjoining sections of Melanesia. These rudimentary elements on the islands have never been explained, but merely accepted on account of their undeniable existence as an *Uru-kehu* strain that runs through the aboriginal population on all the major Polynesian islands.

Intermarriage with frizzy-haired Melanesians has often been suggested to explain the occurrence among Polynesians of what Wallace (1883, p. 499) terms "the slightly curly or wavy hair which distinguishes them from all Mongoloid tribes." However, the fine silky texture and vague undulation occasionally seen in Polynesian hair is so far from being the result of admixture with coarse-haired, stiff-haired and frizzy-headed Melanesians that Sullivan (see Part IV) found it to concur closely with Caucasoid norms. Also, the

rare occurrence of naturally brown or reddish hair is more of an alien intrusion in Melanesia than among the genuine Maori-Polynesians to windward.

We recall from Part IV Buck's statement that the general Maori hair-colour was black, but that brown and reddish hair occurred among certain tribes and was claimed by them as an inheritance from the light-skinned European-like branch of pre-Maori ancestry (the *Patu-paiarehe*). He added: "In the Auckland Museum there is a hank of beautiful wavy hair, obtained from a rock shelter near Waitakerei. That it belonged to pre-European days is proved by the root ends being plaited together and bound round with fine braid prepared from the same hair. Curiously enough, the only other specimen of hair in the same case is also bound round with fine hair braid and is dark brown in colour."

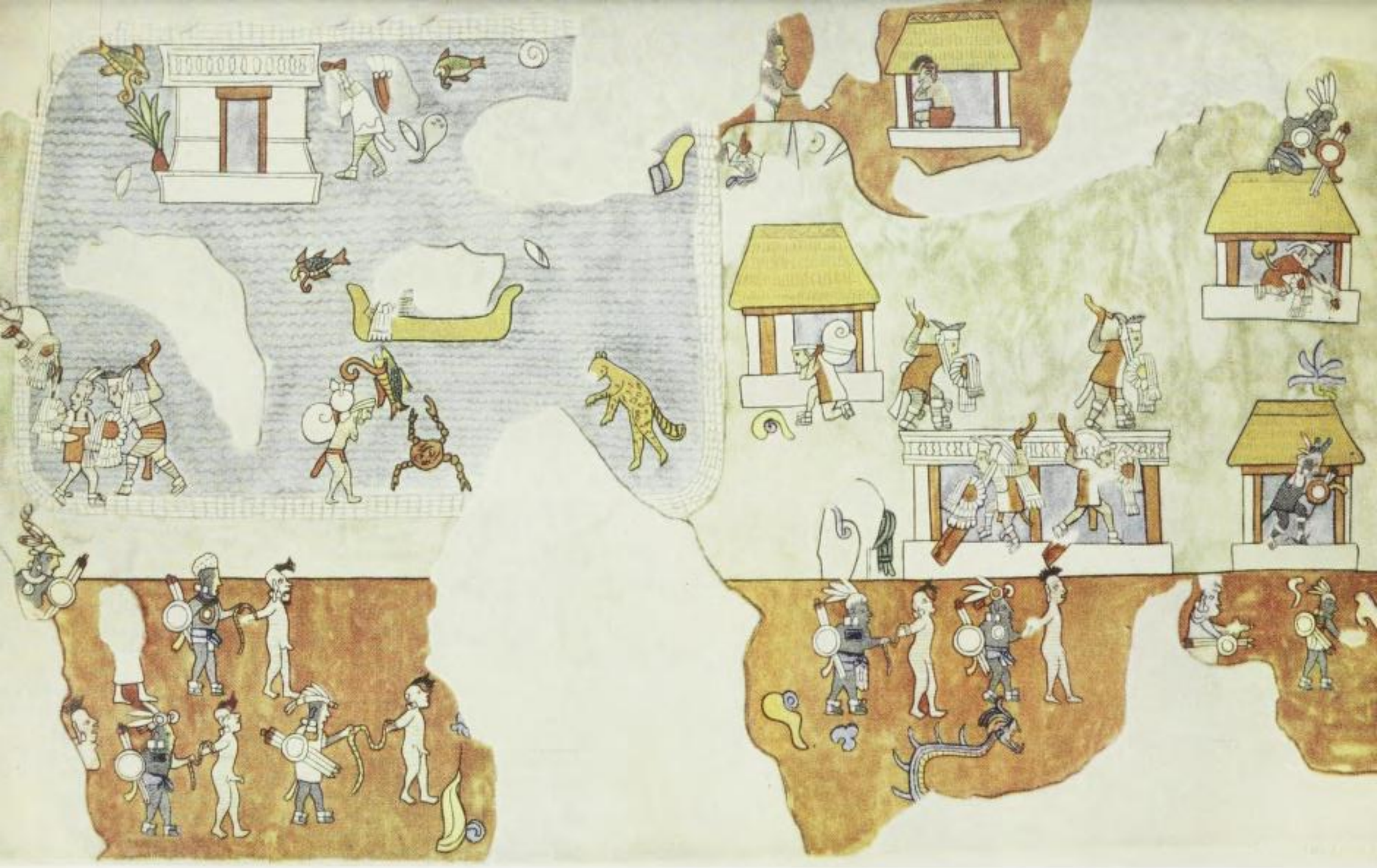
Compare the description of the brown-haired detached mummy-head found at Chocota Bay, of which Wilson (1862) wrote: "It has been neatly braided, and several of the plaited braids are passed across the forehead, for which purpose they have been lengthened by the addition of false hair, so ingeniously joined as nearly to escape detection."

This custom of fastening additional human hair to a person's own is in itself worthy of comment. In Captain Cook's journal (1784, Vol. II, p. 231) from the discovery of the Hawaiian Islands, we read about the local native hair: "Instances of wearing it, in a singular manner, were sometimes met with among the men, who twist it into a number of separate parcels, like the tails of a wig, each about the thickness of a finger; though the greatest part of these, which are so long that they reach far down the back, we observed, were artificially fixed upon the head, over their own hair."

Among the islanders of the Society Group, we learn (Turbott 1947, p. 153) that: "Cords of finely braided human hair were bound round and round the head to form a turban." The same author, in his paper on "Hair Cordage in Oceania", shows (*Ibid.*, pp. 151, 155) that plaited or rolled cordage of human hair was common throughout Polynesia, was used in parts of Micronesia, but in Melanesia only in distinctly Polynesian colonies. He concludes that the distribution of human hair cordage throughout Polynesia and Polynesian colonies "would suggest that its use was a feature of the early culture shared by the Polynesians before their dispersal from a common home." It is therefore interesting to note the frequent archaeological discoveries of human hair cordage in Peru, several specimens of which are preserved among the hair-samples in Museo Nacional of Lima.

A false red wig (Izikowitz 1932), as well as a few attempts to cover black hair with red paint (Wilson 1862; etc.), have been recorded from Peruvian graves, and the Chibcha-inspired Colorados of Equador made their hair artificially red by plastering it with the waxy paste of the *urucu* (achiote). This reminds us of the similar attempts, widespread in Polynesia, to imitate the venerated and naturally red *uru-kehu* hair by artificial applications. (See page 198 above.)[1]

[1] Hagen (1939, pp. 19, 23-25) shows that the hair of the Colorado Indians in its natural state is black and coarse, but among the males it is almost always plastered red with the waxy red paste of the achiote: "To extract the color, the Indian places a good quantity of the seeds in his hand, expectorates upon them or wets them with a little water, and rubs his hands together, as one might make suds with soap. He then throws aside the seeds and applies the color to his hair, an act constantly repeated until it and the scalp are thickly covered with the red paste." He shows that: "The female does not dye the hair, but is content, on festive occasions, to rub a bit of achiote paste on the crown of the head only." Further: "The symbolism of this singular custom is most difficult to determine." He says of the achiote: "The French call it roucou, derived from the word urucu used by tribes of the Guianas."

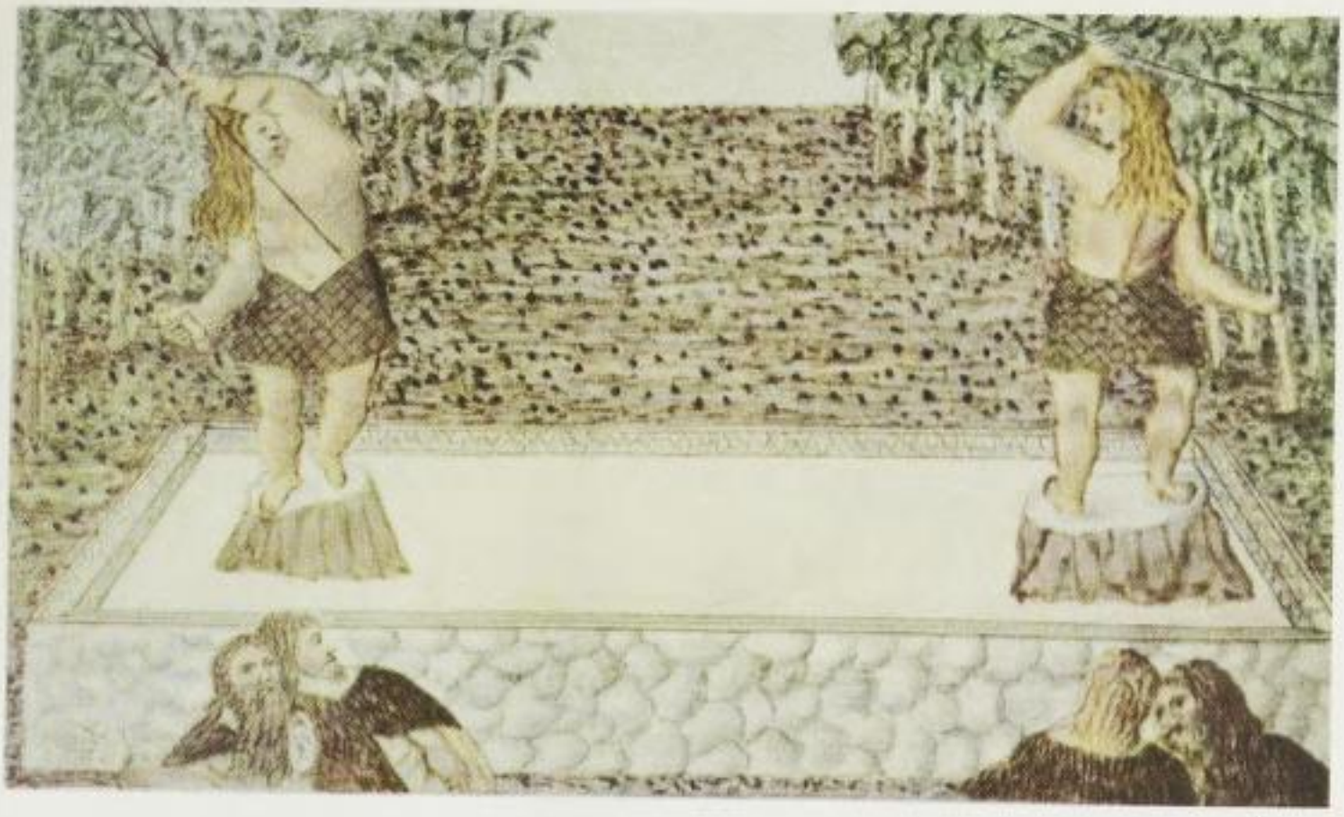


Mural paintings from Temple of the Warriors, Chitzen Itza, Yucatan. The light-coloured men in the bay are apparently packing up to retreat by sea, while others to the right defend a village, or are taken away as prisoners in the procession of victors and captives on the road below. (From *Morris, Charlot, & Morris 1931*, through courtesy of *Carnegie Institution of Washington*.)

Yellow-haired navigator plunging from his craft to the fishes of the sea. Another detail from the same old Maya wallpaintings in the temple at Chitzen Itza. Morris, Charlot, and Morris (*1931, Vol. II. Pl. 146*) who first published the colour reproduction of these pre-Columbian murals, wrote in the caption that they "depict a series of relating episodes concerning a fair-skinned people with flowing yellow hair, defeated in battle and subsequently sacrificed by conventionally equipped black-skinned warriors. The unusual characteristics of the former group, a member of which is here represented in seeking escape by swimming, gives rise to much interesting speculation as to their identity."

Sacrifice of one of the light-skinned, light-haired seafarers. The artists or priests, who decorated this important Maya temple long before the arrival of Columbus, were well acquainted with the fact that there existed individuals, or a people, with race traits different from their own. The problem is: Who were they? (From *Morris, Charlot, & Morris 1931.*)

Additional fragments of the marine battle depicted in the Chitzen Itza murals. (*Ibid.*)



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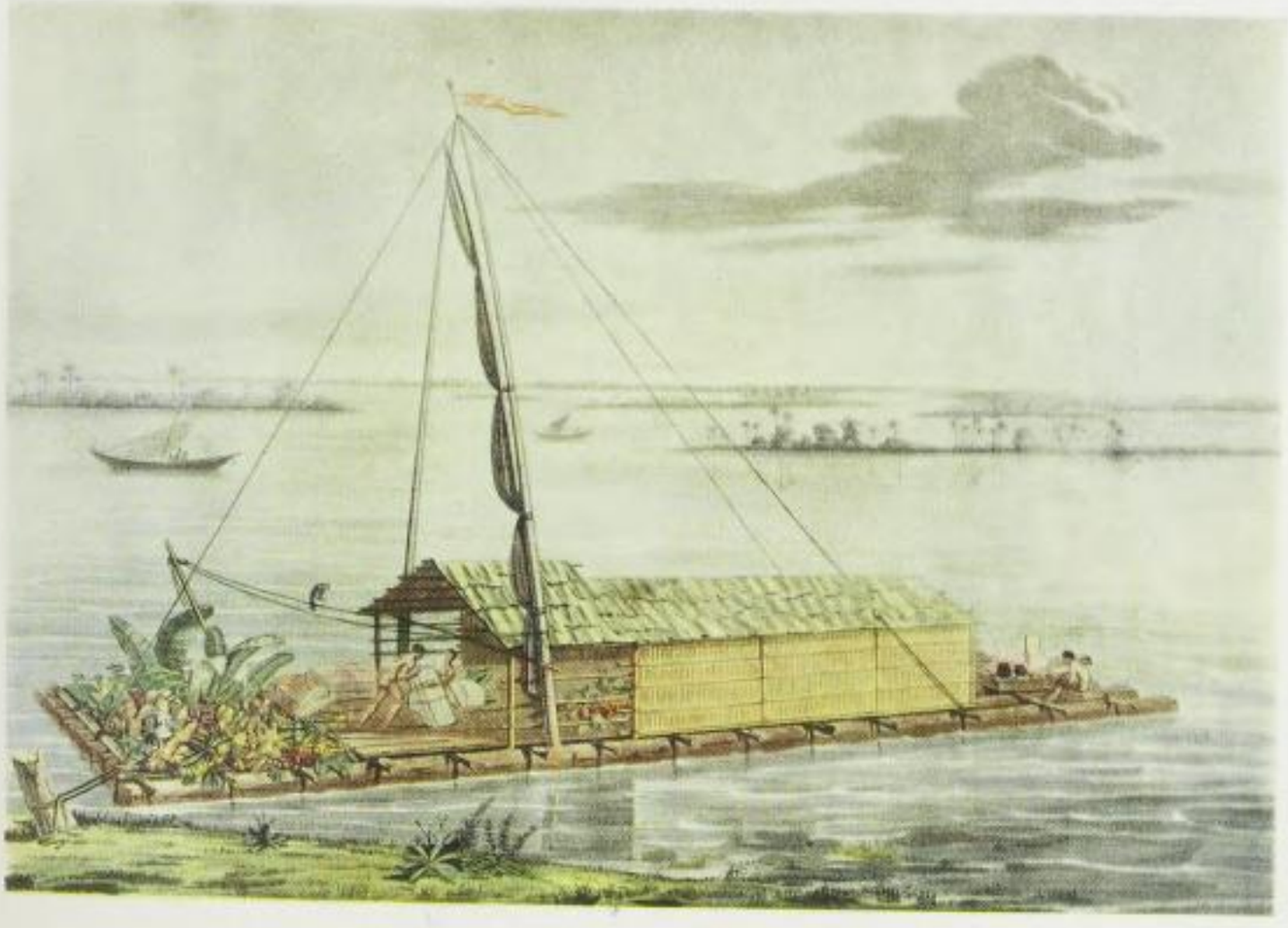

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1 Two young men in a staged fight at Gran Canaria. Watercolours in Torriani's original manuscript from 1590. (From *Wölfel 1940*.) We do not argue a connection with Yucatan. Nevertheless, we must not forget that if the craft of this yellow-haired stone-age people could take them from Africa to the Canary Islands, then it could also send some on in the Canaries Current to Middle America.
2 Balsa raft in Guayaquil Bay; the original craft of Pacific South America. Note storage of fruits and nuts in bow and hut, and cooking place near centre-board in stern. (From *Humboldt 1810*.)

Mummy-bundle from Paracas, coastal Peru. The wrappings, which are more than two thousand years old, have been opened to expose the mummy-head wearing twig with long braids of blond human hair. (Photo: *Museo Nacional de Antropologia y Arqueologia, Lima.*)

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1 Specimen of European-like hair on pre-Inca head from Makat Tampu, near Lima, Peru. Note the fine texture, wavyness, and light colour of the hair. **2** Samples of human hair from some of the bearers of the pre-Inca high-culture at Nazca, coastal South Peru. (Photo: *Museo Nacional de Antropologia y Arqueologia, Lima.*)

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Hair colour and texture of some of the bearers of the extinct pre-Inca high-cultures in Peru. **1, 5, 7, 9** from Makat Tampu, near Lima; **3, 6, 8, 10, 12** from Paracas Peninsula; **2, 4, 11** from Nazca. (Photos: *Museo Nacional de Antropologia y Arqueologia, Lima.*)

Tall stature, narrow face, and non-Mongoloid hair on Paracas mummies

Nowhere in Peru has a really large group of pre-Inca mummies been preserved for posterity under better conditions than those of the Paracas burial caverns and stone-lined tombs on the Pacific coast. Stewart (1943, p. 49) says: "One of the most important developments in Peruvian archeology was the discovery in 1925 by Tello and Lothrop of two sites on the Paracas Peninsula, 18 km. south of Pisco, representing one of the earliest coastal cultures." Here several hundred carefully wrapped mummies were revealed, a small series of which have been systematically examined. Kroeber tentatively places these remains within the Early Nazca period, Tello holds that they even antedate this time and are contemporary with Early Chavín, and the Carbon 14 method suggests that they date from about 300 B. C., plus or minus 200 years. There is accordingly no doubt about their great age and pre-Inca origin.

Examining the blood groups in the tissues of some of these mummies, Candela (1943, p. 65) failed to get the normal reactions of naturally dried and untreated mummies. He suggested that one reason was "the presence in most of the tissues of some gummy, resinous material, serving perhaps as a preservative. This substance was particularly evident in the extracts produced by means of boiling water, and it rendered the performance of the tests by this method almost impossible."

Examining the Paracas skeletal remains, Stewart (1943, p. 59) found that these mummified individuals were of a noticeably taller stature than formerly known Indians in Peru, and that they differ from known Indians also in facial form. Both cranial deformation and trepanning were observed. Stewart's own conclusion was: "It appears hence that the Paracas group differs from the Peruvian skeletal remains thus far studied, particularly in general size and in narrowness of the facial features. As I have pointed out, however, this may be a selected group of large males and not typical of the population as a whole."

The author also suggests that the narrowness of the facial features may perhaps be explained as a secondary alteration following an artificial deformation of the skull.

If there was any way of ascertaining that all people in pre-Inca Peru were the same as those of Inca times, then these explanations would undoubtly be the only logical ones, as a narrow face could then only occur through artificial pressure in infancy and an exceptional tallness only by a selection of unusual men for mummification. But until an historically homogeneous race behind the Inca and pre-Inca Empires has been proved to have existed, there is still the possibility that the early people in question were embalmed not because of their size, but because of their rank or race.

The hair on some of these Paracas mummies was also thoroughly analysed. Trotter (1943, p. 69) based the interesting hair analysis on pieces of scalp from ten Paracas mummies of which two were females, and of which one male and one female had in advance been classified as 'young'. She says: "... there was some evidence that the others were old, since the sample in each case was interspersed with very light yellow hairs which may be assumed to have been white. In general, the color was a rusty brown and gave the appearance of having faded. These hairs fluoresced, the lightish or yellowish ones more brilliantly than the darker hairs. In all cases the hairs were extremely brittle and had to be handled

with greatest care." Further (p. 70): "The hair of mummies 94 and 310 was quite definitely wavy; that of the others appeared to be straight."

Trotter does not attempt to give any explanation of this latter interesting statement that two out of ten scalps examined had plainly wavy hair.

Neither does she imply that the rusty-brown hair-colour showed evidence of having faded from the normal blue-black Indian hair, as will be seen from the following. It would also seem difficult to visualize that the rusty hair had brightened from an original black if the light yellow hair on the same heads have darkened from white. One should expect that the hair colour of these mummies either has assumed a generally darker or a generally lighter hue. If *post mortem* change of pigment has taken place on these particular Paracas mummies, as opposed to others in Peru and those in North Africa, then the combination of both rusty brown and very light yellow hair on the same heads would seem to argue that the original scalp either had been black interspersed with rusty brown hairs, or else yellow-blond interspersed with white hairs. The third possibility seems to be that the scalps in question have retained their original shades comparatively unmodified, like the mummy cloth. Let it also be borne in mind that we have previously dealt with a Peruvian mummy head that was described as brown and slightly grey. The mummy scalps now under discussion were also brown, but interspersed with light yellow.

Apart from colour and degree of waviness of hair, its fineness and also the shape of its cross section are, as is well known, the two additional characteristics used for classifying hair types. Mongoloid hair, like that of the common American Indian, is wide in cross section *area* and circular in cross section *form*. The degree of ovalness in cross section form seems closely associated with the degree of waviness or curliness of the hair itself.

Trotter (*Ibid.*, p. 72) says about the microscopically analysed form of the Paracas mummy-hair, after classifying it in accordance with Martin's grading system: "The cross section form shows so much divergency between the different mummies that they cover all divisions of hair form..." And: "It has been assumed that these mummies are all from one racial stock, therefore this analysis must necessarily be one of individual variation from an intraracial standpoint."

As to the *size* of the cross section *area*, she found (*Ibid.*, p. 75) that: "The size of the hair was much smaller than has been found for other Indians, but not so small as has been recorded for at least one white racial group [the Dutch]."

The author stressed in her summary that: "The form and size of the hair of ten Paracas mummies showed wide variation." She showed that although some of the hair samples were wide, yet the average from all ten mummies was "approximately 30 % less than the average mean areas found for the four Indian tribes by Steggerda and Seibert and for the adult French Canadians by Trotter and Dawson."

Unguided by any working hypothesis Trotter presents her important analysis of the Paracas mummy hair as a series of remarkable somatological data from early coastal Peru. On the assumption that the current anthropological view is correct, that no intrusive or mixed race element was present in Peru before the arrival of the Spaniards, Trotter was led to speak of the necessety of "individual variation from an intraracial standpoint", while suggesting that the unusual Caucasoid fineness of the hair might possibly have been due to changes during the process of mummification. On my asking whether or not there

was any actual reason to believe that the fine, brownish, and occasionally wavy Paracas mummy hair had changed greatly post mortem, having been coarse and black like normal Indian hair on the live natives, Dr. Trotter (1951)[1] wrote me as follows with reference to her paper quoted above: "I have gone over all the evidence we have and have discussed it with Mr. O. H. Duggins, who is now working with me on the subject of hair. His background is an interesting one, since he has worked in the hair and fiber section of the F. B. I. I have come to the conclusion that there are two mistakes in my paper on the mummies' hair. The first mistake was to introduce the word 'Indian', and the second was the use of the word 'faded'. Now I shall try to answer your direct question with a direct answer. The hair of the Paracas mummies which I examined in 1943 may have changed color and texture slightly. However, the amount of change in either color or texture from any evidence we have would not deny that the original color was a reddish brown and that the original texture was fine." Although no reason was found to warrant the hypothesis that the reddish-brown scalps had ever 'faded' from blue-black, microscopic examination showed that the light yellow hairs, interspersed to a very slight extent in eight of the samples, contained no pigment, and hence presumably had been even lighter, or white.

Trotter further writes that the cross-section area of hair is closely correlated with its weight, and that hair of Arabs of Central Iraq was tested for change in weight before and after dehydration. After 16 hours of dehydration the alteration of weight ended, and no further change took place afterwards. The hair had then lost between 4 and 5 per cent of its weight. Trotter (*Ibid.*) writes: "Since this Arab hair lost its weight during the first 16 hours of dehydration it is unlikely that shrinkage of mummy hair (if it does occur) could greatly exceed 5 per cent of the volume." This is interesting, since she found, as we have earlier seen, that although some of the Paracas hair samples were wide, yet the average from all the mummies examined was approximately 30 % less than on normal Indian hair. Evidently then, Trotter is right in being cautious in the use of the word 'Indian' with reference to the Paracas mummies, provided the term 'Indian' may not be used in its widest sense to denominate any racial type inhabiting the Americas before the arrival of Columbus.

Before I was kindly furnished with this interesting information by Trotter, the British Museum had suggested W. R. Dawson as a leading British authority to consult on the question of possible change in mummy hair. Dawson (1928, p. 127) who is earlier quoted as examining on the Pacific coast of North Chile an embalmed adult women with "abundant light-brown hair", was kind enough to send me his opinion as follows[2]:

"From the examination of a large number of mummies both from Egypt and other countries including South America, my opinion is that hair does not undergo any marked change post-mortem. The hair of a wavy or curly individual remains curly or wavy, and that of a straight-haired person remains straight. In mummies and desiccated bodies the hair has a tendency to be crisp and brittle, but this is the natural result of the drying-up of the selacecres glands, which during life, feed fatty matter into the hairfollicles which keeps the hair supple and flexible. ... it seems to me very unlikely that any change in colour would take place in a body which had never been exposed to the light, ... To

[1] M. Trotter, Professor of Gross Anatomy, Washington University School of Medicine, letter dated June 22, 1951.
[2] Letter dated May 21, 1951.

sum up then, all the evidence I have indicates that the nature of hair does not alter after death except in becoming dry and brittle."

There is accordingly every reason to give full attention to the non-Mongoloid characteristics of the somatological remains at Paracas. Obviously the high percentage of reddish brown hair on these embalmed culture bearers does not represent a cross-section of the population in Peru as a whole during these early periods. We may well assume that the common Indian was not mummified, the process at least of true embalming would in all likelihood be restricted to the upper social classes of such peoples as knew the process of artificial mummification. It is therefore especially interesting to note the high ratio of brown hair among the black on the early people who evolved—or imported—the high-cultures of Peru.

The position may be briefly summarised thus: An analysis is made of a group of well-preserved mummies from the central coast of Peru for the specific purpose of gaining all possible information about the physical appearance of the unknown bearers of a lost pre-Inca high-culture. If their stature, cranial and facial indices, and hair had been found to concur with the physical data already known as characteristic of the region, then the observed data would probably have been used as an argument for homogeneity of race, without considering the possibility that the extinct race may have looked entirely different from what their own remains suggested.

As it is, however, neither stature, cranial and facial indices, nor hair, have been found to concur with the familiar norm of local Indians, and it has therefore been suggested that these mummies in every way misrepresent the physical type of their own unknown race. Divergency in head form is readily accounted for through more or less distinguishable modification in early childhood, a practice which admittedly occurred; and a difference in face type is explained as possibly a secondary result of the former deformation, a hypothesis of less apparent strength, as this should give a narrow face-form to any Peruvian whose head was correspondingly deformed. When the hair is brown it is suspected as having been formerly black, and when exceptionally fine it may have shrunk. When wavy and including all extremes of hair-form, it may be unusual variations from the mean tribal norm. The skeleton, which cannot have *increased* through deformation in infancy or mummification, can still give us a wrong impression of the bodily build, if we assume that only the largest men of the community were specially selected for mummification.

Separately considered, each of these excuses for the unexpected nature of the Paracas mummies may carry some weight, but as a whole they merely work against each other. It would be too fantastic to assume that all the main physical traits of the mummies analysed should in one way or another misrepresent the mummified race, both through childhood deformation, *post mortem* shrivelling and fading, individual divergency and intentionally selective burials. If this be so, nothing has been learnt from the discovery of the Paracas mummies as such, everything pertaining to their physical appearance may be misleading, and for those who wanted to know what these early people were like, nothing is gained by seeing them. On the other hand, while drawing no exaggerated conclusions, it can safely be said that nothing discovered in the Paracas caves argues against the hypothesis that a foreign Caucasian-like race entered into the culture complex of pre-Inca Peru,

and that this race was comparatively tall in stature, with a narrow face, and hair in varying shades of brown, fine in texture and occasionally wavy. We can only say that we have found what we were looking for also among the physical remains of prehistoric Peru. They confirm what was indicated by the Inca memories and the pre-Inca pottery heads: that a non-Mongoloid and Caucasian-like element seems to have been present in the early local era. The burden of proof, and of finding a plausible explanation, here rests upon those who maintain that nothing but Mongoloid traits have been observed in available human material from pre-Inca Peru.

Historic evidence

In his popular survey of aboriginal culture in prehistoric America, Verrill (1927; 1929) brings up for a stimulating discussion some of the elementary questions pertaining to the rise and spread of the local high-cultures. Pointing out the coherent geographical pattern of old civilizations in the New World, he stresses (1929) the improbability of this inter-tropical distribution-area being the result of numerous sudden and independent flowerings of culture in these often unfavourable desert and jungle areas. He points to the generally noted absence of any local culture-growth or cultural experimentation underlying the respective cult sites, such as Coclé, San Augustin, Tiahuanaco etc., and to the fact that each distinct culture area shows the widest variation from the others in detail and character, although the basic ideas were the same and were consistently common to them all. This leads him to the logical deduction that migrants from some of the local civilizations may perhaps have been active among the aboriginal population in all these localities, spreading the basic principles of their own religious beliefs and cultural doings into foreign and more primitive culture domains. The resultant high-cultures may thus in each case represent a blending of the local primitive culture and the intruding civilization, the primitive elements being perhaps largely responsible for the final destruction of the civilization and the abandonment of its original cult site.

As an argument against the much disputed hypothesis of a racial homogeneity in aboriginal America, the same author (1927, p. 45) writes :

"Although the majority of North American Indians have brown eyes and coarse, straight, black hair, there are tribes whose eyes are hazel, grey, or even blue, and whose hair is brown rather than black, and is soft and fine. Indeed, if we read over all the accounts of the old discoverers and explorers we will find that, even in those days, the men who had actually travelled among the Indians had accurately described these variations. Dampire, the pirate naturalist, Ringrose, Esquemeling, and many others called particular attention to the light skins and brown hair of many tribes and, in several places in their journals, they state that the women are 'as fair as any woman of Spain', or that their hair 'is exceedingly long and soft and of pleasing brown shade'. This proves that the light skins, brown hair, and grey eyes of some Indian tribes are not due to any admixture of Caucasian blood."

Whatever may be the origin of these Caucasian-like features, they had at least found their way to early America, or had developed locally, before the Spaniards arrived. Already by 1502 or 1504, Angelo Trevisan's letter to the King and Queen of Spain was published,

describing the men of a certain Arawak tribe as "of light colour, with long hair and beards".[1]

As far as the Inca territory is concerned, it may be interesting to notice a reference made by Pedro Pizarro (1571, p. 380) who himself took part in the conquest of Peru. He distinguishes between the lords and ladies of the land (the Inca long-ears) and the 'common and lowly' population who were their subjects: "Among the Ladies there were some tall ones, not among the daughters of the Kings, but among (those of) the orejones, their kinsmen. ... They considered themselves beautiful, and almost all the daughters of these Lords and orejones were so. The Indian women of the Guancas, Chachapoyas and Cañares were the common women, but most of them beautiful. The rest of the womanhood of this kingdom were plump, neither beautiful nor ugly, but of average appearance. The people of this kingdom of Peru were white but of a tawny hue, and among them the Lords and Ladies were whiter than Spaniards. I saw in this land an Indian woman and a child who did not differ from those who are white and blond. These people say that the latter were the children of the heathen gods."

Pizarro saw the aboriginal Peruvian nation before the fair-skinned local society was absorbed by the Spanish settlers, and before a casual light and blond Peruvian could be suspected of post-Columbian impurity of blood. Obviously, it was the particular minority of the Inca nation consisting of the upper aristocracy and the superior physical and intellectual types (judged by European taste and standards) which after the conquest quickly became absorbed by and lost among the Castillian colonists. The local Indian population of Peru to-day are only the descendants of the lower classes and of less attractive mental and physical types among the masses once ruled by the Cuzco Incas. They give a thoroughly misleading conception of the former Inca aristocracy, their physical and mental bearing and quality, their culture and knowledge.

As Verrill (1929, p. 21) again expressed it:

"... the Mayas, the Aztecs and the Incans were not homogenous races of one blood. In all cases they were the result of conquest and confederation of many races and tribes by an

[1] Radin (1942, p. 7) writes: "The Trevisan letter thus contains the earliest description of the natives of South America and merits full quotation: 'The men, of light color, with long hair and beards, are of fine stature, gentle, and show a desire for new things, and this was indicated by signs. And they indicate with the hand that the interior of the country was very populous and had various peoples; for when we asked them about both the chair and the utensils, they managed to indicate by signs with the hand that people came from inside the country and took shells of the pearls—or rather, of the containers (i. e. oysters) and pearls—for their garments. (Those natives) had also some clothes of cotton.'" Lothrop (1942, p. 258) writes concerning the high-culture centre of Coclé in Panama: "...we should point out that the population of Coclé may well have been of multiple origin. At the beginning of the sixteenth century, Spanish accounts make clear, there was great diversity of speech and physical type. This is exemplified by the giant bearded warriors of Escoria, by the frequent need of interpreters between one village and the next." He also writes concerning the tribes in this same neighbourhood (1937, p. 13): "We have already quoted (p. 10) a passage from Andagoya concerning the very tall warriors of Escoria. The existence of these is confirmed by Espinosa who remarks that two brothers of the chief were 'so large and strong that they seemed giants; and one of them as bearded as the most bearded Christian could be.' Certain skeletons at the Sitio Conte measured over 178 centimeters (5 feet, 10 inches) in the ground although not in a fully extended position and certain individuals must have stood well over 6 feet in life. Less definite evidence of physical variation comes from López de Gomara who states that most of the natives varied in color between yellow and 'lion' but some were as black as the inhabitants of Guinea. The same writer also mentions very tall people."

intellectually superior people. No doubt these superior people, who formed the ruling classes,—the priests, etc.—were of a distinct type from the bulk of the population. . . . The Incas themselves were, we know from the records of the Spaniards, a much lighter-colored lot than their subjects, and possessed almost Caucasian features. Portraits made from life soon after and even during the conquest prove this, and the same is true of the aristocracy of the Aztecs."

The noted Inca historian, Markham (1911, p. 121), has also stressed this physical distinction: "We see the Incas in the pictures at the church of Santa Ana at Cuzco. The colour of the skin was many shades lighter than that of the down-trodden descendants of their subjects; the forehead high, the nose slightly aquiline, the chin and mouth firm, the whole face majestic, refined, and intellectual."

We have also seen that one of the ruling Incas received the name Viracocha because he found himself able to grow a beard. Inca Viracocha's sister-wife was called Mama-Runtu, meaning "Mother Egg". This was, says Inca Garcilasso, because of her fair complexion, as she was supposed to be "white as an egg".

Those who doubt that beards grew in aboriginal Peru have overlooked the fact that when the Spaniards arrived the Inca nation already possessed their own word for a "bearded man": *Soñkhasapa*. (Ondegardo 1940, p. 154.) Although anything but light-skinned, the primitive and isolated Sirionos of Inca-occupied Bolivia had also great bushy beards, besides slightly wavy, fine hair.

We have seen how the Inca dynasty claimed divine and solar descent through inheritance from their leading culture-hero Viracocha; also how Titicaca Island tradition described the Incas as the offspring of native women and a subsequently expelled race of white men. These native beliefs should be judged alongside the early European paintings of the Incas at Cuzco, as well as Pizarro's already quoted statement that among the Inca nobles "there were some who were whiter than the Spaniards". Pizarro's statement, also, that white and blond individuals were locally considered to be "the children of the heathen gods" has specific significance when we recall that it was Viracocha who was the "heathen god" confronted by the Spanish missionaries in Peru.

Since the blond woman and child met by Pizarro in early Inca Peru were locally considered to be "the children of the gods", we may recall how the same expression was used in Polynesia, where blond or *uru-kehu* individuals among the native stock were called "the golden-haired children of Tangaroa". We have earlier seen how Tangaroa, in the Society Group, was stated to be but another name for the first Polynesian monarch Tiki (Ti'i), which again take us back to the original name for Viracocha, the "heathen god" of Peru. We also recall how fair-haired children were held in high esteem in Polynesia, such hair being regarded in New Zealand as a sign of high chieftainship. On the Titicaca plateau, even to-day, we learn from La Barre (1948, p. 217) that among the Aymara Indians: "Children or babies with white hair (albinos) are called *Tatitum Munata*, or 'beloved of the Lord'."

It is interesting to note that the earliest Spanish explorers recorded an exceptional whiteness of the skin, and occasionally light hair, among Peruvians who had never before seen Europeans. For it is obvious that such natives, if met a generation later, or in our day, would be overlooked as of mixed European descent, whereas we should look to the com-

mon bulk of the more primitive-looking population for genuine representatives of pre-Spanish South America. The evident impossibility of distinguishing pre-European from post-European elements with regard to Caucasian-like individuals among the Peruvian Indians of to-day makes a search for pre-Inca hereditary traits among the present population even more futile. Thus a survey of Titicaca Island physical types to-day may perhaps to some extent indicate a complex background, but nothing more. Bandelier (1910, p. 67) wrote from the island: "Among the men there are some tall and well formed figures, with pleasant faces; many are of low stature and have sinister countenances." There is still an individual variation in skin colour among aboriginal Peruvian Indians, but only when a marked distinction is found to set aside a tribe rather than an individual, the possibility of European infiltration is somewhat reduced. Thus, when a whole Peruvian highland tribe, like the Chachapoya, are noted for what is described as an "unusually light skin" (Rowe 1946, p. 187), the persistence of a hereditary characteristic from early times is certainly suggested.[1]

Although as a general rule brown hair seems to have vanished from aboriginal Peru with the era of the culture-yielding predecessors of the present Quechua and Aymara-speaking population, brown hair has sporadically appeared—as in the *uru-kehu* strains of Polynesia—among other sporadic South American tribes until our days. In his paper on "The pigmentation and hair of South American Indians", Steggerda (1950, p. 85) first shows the great instability of skin colour among the aborigines of this territory, varying from those who have "a very light skin color, almost white" to those whose colour is "a coppery or even purple-brown". He then goes on to say (*Ibid.*, p. 89):

"In describing the hair of Indians in both North and South America, anthropologists very frequently use the general adjectives: 'coarse', 'black', and 'straight'. Many tribes, however, do differ from this description; and those comments of anthropologists that deviate significantly are recorded below. According to Harris (1926), who has made a thorough study of the brown and white Indians of San Blas, the hair is black in brown Indians, and from flaxen to straw-colored in the white Indians. ... Skottsberg (1913) describes the hair of the *Alacaluf* as brown, in contrast to the uniformly black hair of the Fuegians. [Their eyes are dark blue in children]... In the *Guayakí*, the hair varies from brown to shiny black (Vellard 1934). Serrano (1930) has made an interesting observation on the *Mataco* and *Choroti;* the hair of adults is black, while in the children it is reddish. ... Roquette-Pinto (1938) comments on the hard, straight hair of the *Nambicuara*, but mentions that he has seen a few of these Indians with wavy hair. The *Puinave*, an independent group in Colombia, is worthy of special comment; Pericot y García (1936) quotes a remark taken from Tastevin, in which the hair color of these Indians is described as chestnut brown to almost blond. Pericot y García (1936), however, states that their hair is black and straight... The *Bacaïri* hair color, though apparently black, shows a brown hue in strong sunlight, and the children always have this shade of hair. ... Wavy and frizzly hair has also been seen among certain individuals of the *Arawak* tribes; according to Pericot y García (1936), the incidence of wavy and frizzly hair is rather great. Among the Indians whose hair sometimes diverges from the norm are also the *Botocudo*. There is a frequency

[1] We have just seen that the Chachapoya were one of the particular tribes specified already by Pizarro for the beauty of their women.

of reddish-brown hair in this tribe (Manizer 1919). Stegelmann (1903) also discovered a tribe of peculiar appearance living on the upper Envira River in Brazil. Their hair was light red, similar to that found in certain Jewish types. Their skin was red also. The other Indian tribes called them '*Coto*', which means 'howling monkey', because of the similarity of their color to that of this particular monkey."

Psychological reactions to European arrivals

National traditions of a period when people of an other race had lived among them as rulers and culture-bearers would naturally produce a visible reaction in any country if alien newcomers arrived with a physical appearance similar to that of the departed heroes. As is well known, it was just such reactions that, in different circumstances, led to the easy conquest of Mexico and Peru, as well as to the tragic death of the famous Pacific explorer Captain Cook.

When Juan de Grijalva led his expedition from Cuba to Cozumel Island in 1518, and thence passed over to the Yucatan peninsula to explore the coast of the Mayas, and likewise when Hernando Cortes in the following year landed in the old wake of Quetzalcoatl on the Aztec coast of Vera Cruz to begin his famous conquest of Mexico, the Spaniards were amazed to find that vastly superior native armies remained quiescent instead of attacking or resisting the small invading party of Europeans.

This circumstance had the greatest historic consequences for the opening up of the New World to our own race. The sole reason for the failure of the Aztec emperor Montezuma to make use of his large fortresses and armies was the confusion in the native mind between the Spaniards and the white hierarchy which was the foundation of their own religion and history.

Brinton (1882, p. 138) shows with the early Mexican chronicler Tezozomoc[1] how the great Aztec monarch was confused: "... when his artists showed him pictures of the bearded Spaniards, and strings of glittering beads from Cortes, the emperor could doubt no longer, and exclaimed: 'Truly this is the Quetzalcoatl we expected, he who lived with us of old in Tula. Undoubtedly it is he, *Ce Acatl Inacuii*, the god of One Reed, who is journeying.' "

The dramatic history of Cortes tells how the belief that he was the returning Quetzalcoatl made the Aztecs sacrifice to him a human victim, with whose blood the conqueror and his companions were marked. When Cortes had his first interview with Montezuma, the latter addressed him through the interpreter Marina in very remarkable words that were recorded for posterity by Cortes himself in his *Carta Segunda*, (October 30th, 1520)[2]: "Having delivered me the presents, he [Montezuma] seated himself next to me and spoke as follows: 'We have known for a long time, by the writings handed down by our forefathers, that neither I nor any who inhabit this land are natives of it, but foreigners who came here from remote parts. We also know that we were led here by a ruler, whose subjects we all were, who returned to his country, and after a long time came here again and wished to take his people away. But they had married wives and built houses,

[1] *Cronica Mexicana*, Chap. 108.

[2] English translation by Brinton (1882, p. 139).

and they would neither go with him nor recognize him as their king; therefore he went back. We have ever believed that those who were of his lineage would some time come and claim this land as his, and us as his vassals. From the direction whence you come, which is where the sun rises, and from what you tell me of this great lord who sent you, we believe and think it certain that he is our natural ruler, especially since you say that for a long time he has known about us. Therefore you may feel certain that we shall obey you, and shall respect you as holding the place of that great lord, and in all the land I rule you may give what orders you wish, and they shall be obeyed, and everything we have shall be put at your service. And since you are thus in your own heritage and your own house, take your ease and rest from the fatigue of the journey and the wars you have had on the way.' "[1]

Brinton (*Ibid.*, p. 140) comments: "Such was the extraordinary address with which the Spaniard, with his handful of men, was received by the most powerful war chief of the American continent. It confessed complete submission, without a struggle. But it was the expression of a general sentiment. When the Spanish ships for the first time reached the Mexican shores the natives kissed their sides and hailed the white and bearded strangers from the east as gods, sons and brothers of Quetzalcoatl, come back from their celestial home to claim their own on earth and bring again the days of Paradise; a hope, dryly observes Father Mendieta, which the poor Indians soon gave up when they came to feel the acts of their visitors.[2]"

The Maya Empire and its civilization had already ceased to exist by the time the first Spaniards arrived, but the early beliefs and predictions were still alive among the people. As Brinton (*Ibid.*, p. 167) says, they were obscure, "but the one point that is clear in them is, that they distinctly referred to the arrival of white and bearded strangers from the East, who should control the land and alter the prevailing religion.[3] Even that portion of the Itzas who had separated from the rest of their nation at the time of the destruction of Mayapan (about 1440—50) and wandered off to the far south, to establish a powerful nation around Lake Peten, carried with them a forewarning that at the 'eight age' they should be subjected to a white race and have to embrace their religion;..."[4]

What passed in the more savage minds of the many Indians of Central America at the first sight of the white Spaniards may be difficult to judge, as nothing indeed happened among these smaller jungle tribes which could leave comparable traces in history. The Spaniards, rarely behaving as friendly "god-men", frequently stirred up trouble with primitive peoples on the Isthmus, but there is still ample evidence that their physical appearance could enable them, like any white and bearded men, to pass freely through the jungles as "supernaturals". Andagoya (1541—46, p. 25) gives the following instance, speaking of the original 'migration' of a small group of Spaniards from Nata to Paris,

[1] The words of Montezuma are also given by Father Sahagun, *Historia de Nueva España*, Book 12, chap. 16. Montezuma referred to the prediction several times, according to Bernal Diaz, *Historia Verdadera de la Conquista de la Nueva España*, chap. 89, 90.

[2] *Historia Eclesiastica Indiana*, Book 2, chap. 10.

[3] "Nakuk Pech, *Concixta yetel mapa*, 1562, MS.; *El Libro de Chilan Balam de Mani*, 1595, MS. The former is a history of the Conquest written in Maya, by a native noble, who was an adult at the time that Mérida was founded (1542)." (*Ibid.*)

[4] Juan de Villagutierre Sotomayor, *Historia de la Provincia de el Itza*, passim (Madrid, 1701).

north of Panama: "The Indians had never seen Spaniards, and held such people to have fallen from the skies, and they would not attack them until they knew whether they would die."

If we assume that these primitive but warlike tribes retained no national memory of former 'white' people who had passed and claimed personal sun-descent, this incident pertaining to Spanish migration is no less informative, since it then at least shows how readily local primitives at that time confused a foreign race of light colour with supernatural sky-people and so let them pass without injury. Only when this group of Spaniards, having received a gift from the savages amounting to "eleven *castellanos* of good gold", entirely lost their heads and wanted to seize the chief, did they involve themselves in hostilities and have to flee *in stolen native canoes*, following the coastline to the province of Comogre, at the southern extremity of the Panama Isthmus. These very same simple water-routes of migration or escape through Panama were open not only to the Spaniards, but also to any local *Quetzalcoatls* or *Kukulcans* of pre-historic times.

Just south of this narrow Isthmus, the treasure-seeking Spaniards entered the territory of the peaceful Chibcha of Colombia. The earliest traditions of this northern Andean people were also of the arrival and local ministrations of a white and long-bearded monarch so that the Spaniards were immediately taken for members of the same race. This hero was locally known under various names, among which were *Sua* and *Chiminigagua*, "and when the Spaniards first arrived they were supposed to be his envoys, and were called *sua* or *gagua*, just as from the memory of a similar myth in Peru they were addressed as Viracochas." (See p. 282 above.)

This brings us back to Peru and the Inca Empire, where also a handful of Spaniards conquered an empire by the effects of their appearance upon the local hierarchy. As the subject has already been dealt with we shall only give a brief summary of the Inca reactions to the coming of the Spaniards based on the early accounts of Garcilasso, Cieza, Sarmiento, Polo, and other chroniclers from early Peru. As man's physical capacity and his desires and inclinations can not have changed much between the days of the Old Maya and Early Chimu and those of Cortes and Pizarro, and as the size and conformation of the land, its coasts and jungles, mountains and valleys were the same in both periods, one may well suspect that what happened in the generation of Pizarro could have happened also in the long centuries and millennia when America was unknown to us.

When the Spaniards had established their first small colonies at Darien, on the Atlantic side of Panama, they soon marched across the narrow Isthmus to find, in 1513, a vast ocean on the other side. Exploring the sparsely inhabited coastline further south along the Isthmus and northern Colombia, they found a closed jungle wall reaching to the sea, and extensive stretches of mangrove-covered swamp-lands uninviting to treasure-seekers, clergymen and settlers alike. This caused them to push on rather quickly in small self-made sailing craft, closely following the coastline with its fresh-water outlets in search of more favourable regions. It is generally thought that Andagoya reached Colombia in 1522, doing part of his exploration in a native canoe, and Pizarro went a little further two years later. Returning from his first trip and setting out again, Pizarro passed on in 1527, with certain interruptions, straight to Tumbez in Peru, and from here the coast of the former Chimu Empire was explored right down to Santa near Chimbote.

Thus, only fourteen years after Balboa's discovery of the Pacific Ocean, and eight years after Cortes' landing in Mexico, other small groups of Spaniards had worked down the coast of Peru. Not satisfied with this journey, Pizarro went back to Panama, crossed the Isthmus and returned to Spain to inform his King about the new land, and to obtain a concession to conquer it. He came back, crossed the Isthmus with a little group of followers and was down in Tumbez for the second time by 1531. According to Sarmiento (1572, p. 186), on Pizarro's first visit to Peru, Inca Huayna Capac was the mighty ruler of the vast empire, which then comprised several of the present republics of western South America.[1] The same early authority claims that the emperor and his son Atahualpa then received the news that none less than Viracocha himself and his followers had arrived on the coast near Tumbez and had departed again. If this is correct, this incident had no doubt recalled to the emperor's mind the tradition that the departing Viracocha had promised to return; the news must therefore have strengthened his belief in this sacred culture-hero, who had been blindly worshipped as the principal deity of this empire for the many generations since he left their northern coast.

The concurrence of the Viracocha traditions with Pizarro's brief visit of 1527 seems to have awakened in the minds of the Peruvians a feeling that century-old warnings were about to be fulfilled and that the end of their empire was approaching, since Viracocha had suddenly returned, and was afloat somewhere nearby. Priests foresaw what would happen when Viracocha came back to take power, as is clearly shown in the following narration of Pedro Pizarro, who entered Peru with the Spanish conquerors in 1532, roughly five years after his cousin Francisco Pizarro had paid his first visit to the coast. Pizarro (1571 b, p. 470) wrote:

"Hear what I heard an orejon ['long-ear'] say, a Lord of this land. [He said] that five years, a little more or less, before we Spaniards entered this land an idol at Purima which these Indians had twelve leagues from Cuzco and to whome they spoke, had ordered all the Lords together, for he wished to speak to them. And when they were assembled, he said: You must know that bearded men are coming who are destined to overcome you. I have wished to tell you this that you may eat, drink and spend all you have so they may not find aught, nor you have anything to give them. As I say, an old orejon who had heard it told me this."

Thus, when Francisco Pizarro and his less than two hundred followers came back to Peru for the second time in 1532 to begin their march inland, they were by no means unexpected, but played an important part in the minds of the people. Pizarro and his two meagre boat-loads of companions did not come just to settle as *mitimas* in the midst of a powerful military empire, but simply to take it over. Inca Huayna Capac had died in the meantime, and his legitimate son Huascar had succeeded him as emperor of Peru. But he had left the kingdom of Quito in present Ecuador to his favourite son Atahualpa, whose mother was not of Inca blood, being a daughter of the conquered sovereign of Quito. Friction gradually arose between the two half-brothers, which was to end in a war between their large armies. Sarmiento (1572, p. 186) tells us how Atahualpa reacted when he heard for the second time of Pizarro's arrival at the coast:

[1] As Rowe (1944, p. 57) shows, Sarmiento (1572) and Cabello (MS 1586) disagree as to the year in which Inca Huayana Capac died.

"*News of the Spaniards comes to Atahualpa.* Atahualpa was at Huamachuco celebrating great festivals for his victories, and he wished to proceed to Cuzco and assume the fringe in the House of the Sun, where all former Incas had received it. When he was about to set out there came to him two Tallanas Indians, sent by the Curacas of Payta and Tumbez, to report to him that there had arrived by sea, which they call *cocha*, a people with different clothing, and with beards, and that they brought animals like large sheep. The chief of them was believed to be Viracocha, which means the god of these people, and he brought with him many Viracochas, which is as much as to say 'gods'. They said this of the Governor Don Francisco Pizarro, who had arrived with 180 men and some horses which they called sheep ... When this became known to Atahualpa he rejoiced greatly, believing it to be the Viracocha coming, as he had promised when he departed, and as is recounted in the beginning of this history. Atahualpa gave thanks that he should have come in his time, and he sent back the messengers with thanks to the Curacas for sending the news, and ordering them to keep him informed of what might happen. He resolved not to go to Cuzco until he had seen what this arrival was, and what the Viracochas intended to do. ... As no further news came, because the Spaniards were forming a station at Tangarara, Atahualpa became careless and believed that they had gone. For, at another time, when he was marching with his father, in the wars of Quito, news came to Huayna Capac that the Viracocha had arrived on the coast near Tumbez, and then they had gone away. This was when Don Fransisco Pizarro came on the first discovery, and returned to Spain for a concession, as will be explained in its place."[1]

Just about the time when the Spaniards left Tangarara to march inland, open warfare between the Inca brothers had resulted in the capture of Huascar and his imprisonment in Andamarca, while Inca Atahualpa with a powerful army was at Cajamarca, the favourite Inca resort. Pizarro with his less than two hundred followers marched south from Tangarara to Motupe, near Lambayeque, and thence began to ascend the mountains to Cajamarca, out of the plains and valleys of the former Early Chimu Empire and into the Andean highlands. The geographical layout of the land thus made the arriving Spaniards ascend the plateau just where the legendary Tici Viracocha, on departing from the Titicaca highlands, had descended to the coast and gone north to Manta in Ecuador, whence the Spaniards had now come.

When Pizarro's little group entered the highland valleys of the lofty Andes they were in an unknown world. Atahualpa was well informed about their approach, and could have isolated and crushed them with his powerful armies, but the Inca did not permit his warriors to take up arms against the Viracochas. As Brinton (1882, p. 199) put it:

"I have yet to add another point of similarity between the myth of Viracocha and those of Quetzalcoatl, Itzamna and the others, which I have already narrated. As in Mexico, Yucatan and elsewhere, so in the realms of the Incas, the Spaniards found themselves not unexpected guests. Here, too, texts of ancient prophecies were called to mind, words of

[1] The possibility should not be overlooked that the first message to Huayna Capac reached the Inca already during Pizarros first sailing to the northern tip of the Inca Empire in 1524. In that case Atahualpa was now learning of Pizarro's second journey south (1527), and the great lull of his disappearance could have been Pizarro's return-trip to Europe before his final return in 1531. It seems strange that Atahualpa should not be informed of Pizarro's sojourn at Tangarara.

warning from solemn and antique songs, foretelling that other Viracochas, men of fair complexion and flowing beards, would some day come from the Sun, the Father of existent nature, and subject the empire to their rule. When the great Inca, Huayna Capac, was on his death-bed, he recalled these prophecies, and impressed them upon the mind of his successor, so that when De Soto, the lieutenant of Pizarro, had his first interview with the envoy of Atahuallpa, the latter humbly addressed him as Viracocha, the great God, son of the Sun, and told him that it was Huayna Capac's last command to pay homage to the white men when they should arrive."

When Inca Atahualpa arrived in his litter to meet Pizarro and his companions personally, he was accompanied by a vast and well-trained army of veterans, who were strictly forbidden by the Inca to injure the Viracochas. The Spaniards' answer to this reception was to seize the stoical Inca in the presence of his perplexed soldiers and to hold him prisoner against a ransom of a room full of "good gold". Shortly afterwards, the Inca was simply executed by the Spaniards, who felt this would serve their own purpose of conquest. Inca Atahualpa's half-brother Huascar, who at this time was held as a prisoner at Andamarca, had been making frantic sacrifices to Viracocha for deliverance from Atahualpa's vengeance. "When the news arrived almost immediately that strange White men from over the sea had captured Atahuallpa, Huascar's party concluded that the White men had come in answer to their prayers, and so called them *Viraqoca* [Viracocha]."[1]

The historic implications of the fact that Pizarro's party was mistaken for returning pre-Incas are so apparent that they deserve the attention not only of historians, as hitherto, but also of the mythologist and thus the anthropologist. Cieza and Inca Garcilasso emphasize the point. Cieza stresses that he has especially inquired among the Inca 'long-eared' nobles as to why he and his white countrymen were termed Viracochas from their first appearance in Peru, and he was told it was because they were at first mistaken for the sons of the departed god Tici-Viracocha. And Inca Garcilasso, who got first-hand information from his relatives, wrote: "Hence it was that they called the first Spaniards who entered Peru Uiraccocha [Viracocha], because they wore beards, and were clothed from head to foot, ... For these reason the Indians gave the name of Uira-ccocha to the Spaniards, saying that they were sons of their god, Uira-ccocha, ..." He stressed that this outward appearance ensured Pizarro and his companions their reverent reception among the Inca nation, and, as we have seen, enabled solitary men like de Soto and de Barco to criss-cross the country on expeditions without being assaulted, but instead, being humbly addressed everywhere as "sons of the sun".

We know of many similar instances, as when Pizarro sent three common soldiers to spy out the country between Cajamarca and Cuzco, or when Hernando Pizarro travelled for four months from Cajamarca to Pachacamac and Janca and back. Pedro Pizarro's description (1571 b, p. 301) of the siege of Cuzco in 1536 well illustrates how readily the little group of Spaniards might have been crushed during their Andean ascent of 1532: "So numerous were the Indian troops who came here that they covered the fields, and by day it looked as if a black cloth had been spread over the ground for half a league [nearly 2 miles] around the city of Cuzco. At night there were so many fires that it looked like nothing other than a very serene sky full of stars. ... When all the troops who that Inga

[1] Except from Polo in Rowe (1946, p. 294 ft.n.)

had sent to assemble had arrived, it was understood, and the Indians said, that there were two hundred thousand of them who had come . . ." It is obvious that if these Inca armies had given them a hostile reception, no little group of 16th century Spanish swordsmen could have survived even though some of them had horses and a few had arquebuses with a limited supply of powder.

When the Spaniards, in very small groups, had spread from the West Indies to Mexico, Central America and Peru, they had covered precisely the area formerly covered by the unidentified founders of the aboriginal American high cultures. No sooner was Mexico conquered than the local Spaniards marched across to the Pacific and built small sailing craft and started to explore the newly discovered coast and ocean. Thanks to the westerly trade winds and the strong North Equatorial Current, some of these small craft soon pushed out from the coast of Mexico straight across the Pacific ocean. It is most noteworthy from an anthropologist's point of view that all these first craft set out from ancient Mexico when venturing the push into the unknown Pacific. Thus they were all involved in the special winds and currents prevailing north of the Equator. They all missed Polynesia and passed straight into Micronesia, the Philippines and Indonesia. To return eastwards they had to go with the current up into the far North Pacific, far above Hawaii. It has been suggested that Gaetano might perhaps have sighted Hawaii in 1555 on his way back to Mexico, but this possibility has been eliminated by Dahlgren's (1917) monograph on the subject. Polynesia and Melanesia remained entirely unknown to the outside world until the settlers of Peru began to move.

Among the coastal population in aboriginal Peru, gossip and rumours of rich islands out in the ocean had been current since time immemorial, and began to fire the Spanish imagination also. The Spaniards heard such talk among the native merchants who owned the balsa raft fleet at Tumbez and other parts of north Peru, and they heard it again among the aboriginal deep-sea fishermen of Ica and Arica further south. (See further Part VIII.) They also learnt that such rumours among early coastal merchants had caused the famous Inca Tupac Yupanqui, some three generations before the coming of the Spaniards, to set out on to the ocean with a large flotilla of well manned balsa rafts in search of islands, two of which he presumably had found. This ancient Peruvian dream of riches in mysterious lands beyond the ocean led to the Spanish discovery of Polynesia and Melanesia. Sarmiento de Gamboa obtained consent from the Governor of Peru to sail, with the Governor's nephew Alvaro de Mendaña as the expedition's commander, in search of the islands sought for by Tupac Yupanqui.

The Mendaña Expedition left Peru (Callao harbour) in 1567 and sailed straight through Polynesia without sighting land until they reached the large Solomon Islands in Melanesia. On the second voyage (from Paita, Peru) in 1595, Mendaña ran into the lofty Marquesas islands, and the first Polynesians were there seen and described by our own race. Much to their surprise, the Spaniards found themselves to have been preceded in their discovery of these completely hidden oceanic islands by a population many of whom were expressly commented on as having a white skin, and they even came across individuals with very beautiful reddish hair. (See Part IV.) The Mendaña expedition had no interpreter, and nothing has therefore been left for posterity in regard to the impression made upon the natives by the Spaniards beyond the fact of a peaceful reception by light-skinned

islanders paddling and swimming through the water in multitudes. But when the foreign expeditionaries had left, after killing a great number of the natives who came out to greet them, and shooting for amusement women swimming with children on their backs, none of these unfortunate natives ought any longer confuse these modern white visitors with their own god-men of the past. Yet Captain Porter (1815, Vol. II, p. 52) wrote from the Marquesas group during his early visit: "It may be worthy of remark here that the natives call a white man *Othouah* [Atua], their gods bear the same apellation, as do their priests after their death: a white man is viewed by them as a being superior to themselves, but our weaknesses and passions have served to convince them that we are like the human."

Handy (1923, pp. 11, 12), too, emphasizes that, according to a number of the early voyagers visiting the Marquesas, "white men" were referred to as *etua*, the specific name of the venerated ancestor-gods in the native genealogies. Handy speculates as to whether this was due to association of the white men with such local mythical teachings as that which claims that "Tane was fair with light hair and is said to have been the ancestor of the white race". He concludes: "All that one may say with assurance is that the Marquesas islanders, like the rest of the Polynesians, must, at some time prior to the first recorded visits of Europeans, have known of the existence of a white race,..."

It was different when Captain James Cook in 1778 discovered Hawaii on his way to the Northwest American Coast, as he was then able to communicate to some extent with this newly discovered branch of the Polynesians. The tragic outcome of this discovery resulted in a most detailed report being written on all minor episodes associated with it. The second volume of Cook's Pacific voyage in the years 1776—80 was written by the captain himself, and he says of his landing in the newly discovered Hawaiian group (1784, Vol. II, p. 199):

"The very instant I leaped on shore, the collected body of the natives all fell flat upon their faces, and remained in that very humble posture, till, by expressive signs, I prevailed them to rise." And about his walk to the water-pool: "... and every one, whom we met fell prostrate upon the ground, and remained in that position till we had passed. This, as I afterward understood, is the mode of paying their respect to their own great Chiefs." There was, as will soon be seen, a little more behind this boundless veneration of Cook's party. Of the Hawaiian men who came on board his ship, Cook (*Ibid.*, p. 214) also observed that: "... before they departed, some of them requested our permission to lay down, on the deck, locks of their hair." The meaning of this peculiar desire also revealed itself as events took their course.

Volume III of the same narrative, describing the death of Captain Cook, was written by his second in command, Captain King. We learn from him (p. 5) that, when the Englishmen returned to Hawaii in the year following their visit to the Northwest Coast islands, an immense crowd of Hawaiians paddled and swam out to greet them. A local high priest named Koah was then escorted on board Cook's ship: "Being led into the cabin, he approached Captain Cook with great veneration, and threw over his shoulders a piece of red cloth, which he had brought along with him. Then stepping a few paces back, he made an offering of a small pig, which he held in his hand, whilst he pronounced a discourse that lasted for a considerable time. This ceremony was frequently repeated during our stay at Owhyhee [Hawaii], and appeared to us, from many circumstances, to be a sort

of religious adoration. Their idols we found always arrayed with red cloth, in the same manner as was done to Captain Cook; and a small pig was their usual offering to the *Eatooas* (gods)."

Later, when they landed, we learn from King that four men "marched before us, pronouncing with a loud voice a short sentence, in which we could only distinguish the word *orono*. Captain Cook generally went by this name amongst the natives of Owhyhee; but we could never learn its precise meaning. Sometimes they applied it to an invisible being, who, they said, lived in the heavens." As the solemn procession marched up from the beach, not a single person was to be seen except those who lay prostrate on the ground. Cook was led to a truncated stone pyramid on the edge of a field of sweet potatoes, the latter being an ancient Peruvian crop plant, as will be seen later. (Part VII.) The pyramid formed the foundation of a small wooden temple, and was "about forty yards long, twenty broad, and fourteen in height. The top was flat, and well paved."

Describing how the high priest Koah led the procession to the top of the pyramid, King says: "We were here met by a tall young man with a long beard, who presented Captain Cook to the images ..."After chanting a sort of hymn, Koah offered another hog to Cook, making him a long speech. "At this time we saw, coming in solemn procession, at the entrance of the top of the *Morai*, ten men carrying a live hog, and a large piece of red cloth. Being advanced a few paces, they stopped, and prostrated themselves; and Kaireekeea, the young man above-mentioned, went to them, and receiving the cloth, carried it to Koah, who wrapped it round the Captain, and afterward offered him the hog, which was brought by Kaireekeea with the same ceremony."

While Captain Cook was sitting aloft "in this aukward situation, swathed round with red cloth", in the same manner as the two wooden images he had just been introduced to, chanting and ceremonies went on during a considerable time, the crowd below calling *Orono*. By then a second procession had arrived, making great offerings of baked hog and other food, and in the end Cook was anointed with *kawa* by the priests and fed by the high priest Koah, who had, moreover, humbly chewed the food for him. Captain King concludes: "The meaning of the various ceremonies, with which we had been received, ... can only be the subject of conjectures, and those uncertain and partial ..."

On a later day Cook was conducted to the sacred houses of the priestly society, and was again offered pigs and wrapped in red cloth at the foot of a wooden idol in "a sacred building called *Harre-no-Orone*, or the house of *Orono* ..."

While Cook was thus being worshipped, the king had been engaged in a war on the island of Maui in the same group. On his return, new offerings of feather cloaks and pigs were made to Cook, and he was again wrapped in red cloth. At last came the day of departure, which much disappointed and grieved the islanders. No sooner had the Englishmen left before they ran into a gale and were forced to return to the same harbour. Their failure to master the elements made the natives very suspicious. Moreover, the Englishmen had also by this time managed to tell them all about their own god and king and country, and the natives had slowly begun to realize their mistake. When Cook and his companions returned they found that the high priest Koah had changed his attitude completely; he had discovered that Cook was not the ancestor-god Orono (or Rono) and he was now most hostile to the white visitor and his men.

The Englishmen were not so fortunate as Cortes in Mexico and Pizarro in Peru. When the Polynesians found out their own mistake, a small accident was enough to make them fall upon the visitors and slay Captain Cook, dragging his body inland before his men could prevent them. We know to-day that right from Kauai to Hawaii Island Cook was mistaken for the fair ancestor-god Rono, and the news of his 'return' spread like fire all over the group. Thousands of natives had assembled to catch a secret glimpse of the sacred and much talked of white god-men, while Cook had been solemnly led by the priesthood to Rono's own ancient heiau, the stepped pyramid with the little wooden temple on its summit. [1]

Captain King (*Ibid.*, p. 159) says in another connection about this unfortunate confusion: "It has been mentioned, that the title of *Orono*, with all its honours, was given to Captain Cook; and it is also certain, that they regarded us, generally, as a race of people superior to themselves; and used often to say, that great Eatooa [ancestor-gods] dwelled in our country." They also said of the principal image on the pyramid that it represented a certain favourite god of the island king—that is the same as to say an early tribal hero or legendary progenitor—and that he too came from the land of Captain Cook and his followers, or, as King puts it, "that he also resided amongst us."

We know to-day that it was the firm Hawaiian belief that their own great kings after death returned to the original Polynesian Fatherland outside the island world, and took up abode there as Eatooa (Pol.: *Atua*), or gods, among the original Polynesian ancestors of that land. The people of this most ancient fatherland were remembered as being *Haole*, or white men. (Fornander 1878, Vol. II, p. 285.) Orono (or Rono, Rongo, Rogo, Lono), was also one of the ancestor-gods in Polynesia, and had dwelt, since his departure from mortal ken, in the sacred Fatherland.

When Cook and his white followers arrived they were thus mistaken for visitors from the Polynesian Fatherland arriving under Rono's leadership. Thus the Hawaiians could say that great *atuas* dwelt in Cook's and his companions' country, and also that the favourite ancestor-god of the island king resided among the white men. This same confusion will also explain why some of the Polynesians who came on board Cook's ship asked for permission to lay locks of their own hair on the deck. To the Polynesian a part of his own spirit lives in his hair. Buck (1922, p. 40), in his somatologic study of Maori soldiers, was unable to collect hair-samples from his native friends, because, as he says, they would "suspect us of witchcraft if disaster occurred to anyone from whose sacred head hair had been collected." All the more remarkable is it, therefore, that Cook had no such trouble; the natives gladly took the chance and even sought to leave locks of their own hair on board his ship. The reason was obviously that they expected the hair to be taken back to the great Fatherland of the Polynesian race, and with it part of their own spirit, which thus could help to guide the rest of their soul after death to this same sacred and much desired destination, the home of the great kings and heroes of the past.

A strange corroboration is found more than three thousand miles to the south, on another island group also in the extreme east of Polynesia. This was half a century later,

[1] Ellis (1829, Vol. IV, p. 133), at the beginning of last century, met some of the natives who had actually been eyewitnesses to what happened during Cook's visit. They said: "We thought he was the god Rono, worshipped him as such, and, after his death, reverenced his bones."

when Captain Beechey, as the first European, met the islanders of Mangareva during his call with H. M. S. *Blossom*. Beechey (1831) describes how a great number of Mangarevans came out to welcome him, not in canoes, but on a flotilla of sail-carrying log-rafts.[1] (See Plate LXXIX.) The natives were plainly of mixed breed, and as we have seen, some of them are described as very fair-skinned with beards and hooked noses. These latter dressed and looked like a distinct class, and among them was one who seemed to be a chief. None of the visitors knew the native language or what went on in the native mind. The friendly welcome in the course of the visit turned to open trouble, and Beechey narrates how his ship's dog was stolen. Generations later we learned that Beechey too had at first been taken for the ancestor-god Rono, or in Gambier dialect *Rogo* (also *Rongo*).

Beechey's visit happened to survive as a Mangarevan tradition, and was passed orally from father to son until recorded in writing in the Tiripone manuscript. (Buck 1938 b, p. 94.) The natives, at first believing Beechey to be Rogo, whose return had been predicted, had brought their king Te Ma-teoa out to greet him. They had later been shot at, and apparently soon realised their mistake. Tradition proudly recorded that "Ikau and Kohaga stole a dog from the ship."

With the Polynesian ability for preserving traditions, it is noteworthy that Rongo should be brought to mind both by the Hawaiians and the Mangarevans when the Englishmen arrived.[2]

In Central Polynesia Rongo is closely associated with Tangaroa, and the two are sometimes said to be brothers. In Raiatea, Atiu and Samoa, Rongo is said to be Tangaroa's son. (Gill 1876, p. 14.) The Mangaians regard Tangaroa, Rongo, and Tane to be brothers, royal sons of the god Vatea (Atea). Strangely enough, they believed Rongo to have been "darkhaired", whereas his brother Tangaroa was the one who had "sandy hair". (Their brother Tane was blond-haired in Marquesan legends, and Atea, the father, was blond in Hawaiian accounts.) Anyway Tangaroa was considered "altogether the cleverest son of Vātea", who instructed his brother Rongo in various skills, like agriculture. But jealousy arouse between the two in the end, and the blond Tangaroa left Mangaia in the possession of Rongo, while he himself moved further west to take up abode in Rarotonga and Aitutaki. (*Ibid.*, p. 14.) This belief was also so firmly rooted in Central Polynesia that

[1] In Hawaii the legendary Rono was memorized as having left for Tahiti or foreign lands in a "singularly shaped" craft. (Ellis 1829, Vol. IV, p. 134.)

[2] The importance of the early name Rongo is reflected by its sporadic occurrence in many parts of Polynesia. It does not only appear as the name of a deity who ruled in former times, but often to the god of agriculture, and even the god of war, and it also pertains to certain important skills or possessions that were ascribed to the earliest Polynesian forefathers. In the Marquesas group, *orongo* (also *o'ono*) was the term for the local "genealogy" taught by the learned native expert. Both in Easter Island and New Zealand *rongo-rongo* was the term applied to "writing", although Easter Island was the only spot in Polynesia where actual vestiges of a former knowledge of this art has survived. The picture-writings on the local wooden tablets were termed *rongo-rongo*, and we learn that one certain Hinelilu, who came with the legendary local discoverer Hotu Matua in a separate boat with "long-ears", "was a man of intelligence, and wrote rongo-rongo on paper he brought with him". (Routledge 1919, pp. 279, 281.)

When the Kon-Tiki expedition landed with a replica of a Peruvian log-raft in Raroia of the central Tuamotus in 1947, old natives were excited to find that we had come in a *pae-pae* (raft). They told us that such boats had been frequently used for navigating the seas in the earliest ancestral times, and that the oldest name for this type of craft in native songs and legends was *rongo-rongo*. (Heyerdahl 1948 b.)

confusion arouse upon the arrival of the first Europeans. Gill (*Ibid.*, p. 13), who made a careful study of the Mangaia myths and memories during his early local stay,[1] writes:

"...all fair-haired children (rauru keu) in after ages were considered to be Tangaroa's (the god himself had sandy hair); whilst the darkhaired, which form the great majority, are Rongo's. ...Now and then a stray child might be claimed for Tangaroa, whose home is in the sky, *i. e.* far beyond the horizon; the majority of his fair-haired children live with the fair-haired god in distant lands. ... Hence, when Cook discovered Mangaia, the men of that day were greatly surprised at the fair hair and skin of their visitors, and at once concluded that these were some of the long-lost fair children of Tangaroa!"

Since we have seen that both Tangaroa and Viracocha, according to specific native statements respectively in Polynesia and Peru, are but alternative names for an ancestor-god otherwise known as Tiki, we reach the interesting conclusion that Pizarro and Cook seem both to have been mistaken for the same migrant culture-hero.

Even as far west as the Polynesian-affected parts of Melanesia, the arriving Europeans were associated with a formerly known and similar race-type. Riesenfeld (1950 a, p. 25) writes: "In Melanesian mythology, when the immigrants who introduced the custom of erecting megaliths into Melanesia are described they are repeatedly stated to have had light or almost white skin. The first Europeans coming to those parts were therefore frequently identified with them and called by the same name."

In his paper on the isolated Morioris of the Chatham Islands, Skinner also (1923, pp. 25, 50) shows that this southern Polynesian stock preserved vestiges of a sun-worship and sun-descent. When a Moriori was dying, another native "held the head of the dying man in the hollow of his arm, and, pointing to the sun, spoke as follows: Ascend direct above, to the beams of the sun, to the rays of the morning, ... to the source, to the sun, ..." When Captain Vancouver discovered the Chatham Islands in 1791 and the Morioris saw the first Europeans, they immediately suspected that these fair travellers must be solar gods of the same original line as their own sacred ancestry. Referring to Broughton's journal of Vancouver's discovery, Skinner says: "This sun cult seems to have affected their view of strangers, for Broughton says: 'On our first landing their surprise and exclamations can hardly be imagined; they pointed to the sun and then to us, as if to ask whether we had come from thence.' "

We have also seen that in New Zealand too, a light people, termed among other names Pakehakeha by the Maori, had been present before the arrival of the Maori fleet, and that the Europeans upon their arrival were immediately called Pakeha, a name they have retained in Maori tongue ever since. (Smith 1910 a, p. 131; Buck 1922, p. 38; Layard 1928, p. 219; etc.)

Comments and deduction

Surveying all these concurring data pertaining to the early existence of a light-coloured race in America and Polynesia, we find that tribal and national memories, iconographic art, physical inheritance, and burial remains from early periods, all unite to indicate, argue and emphasise the same thing: a Caucasian-like element, differing essentially from the

[1] "The isolation of the Hervey Islanders," Gill (*Ibid.*, p. xii) says, "was in favour of the purity of their traditions, and the extreme jealousy with which they were guarded was rather an advantage than otherwise."

Mongoloid type, was formerly present in the territories concerned. It flourished sporadically in certain centres as an intellectually active and dominant minority, and then disappeared, lost among the hostile Yellow-brown masses by massacre, expulsion, or absorption. We shall soon examine the ruins they left behind among their successors.

If an American Indian had never seen a flowing beard in its right shape and its right place, he would never depict it in art and describe it in tradition. Imagination would make a benevolent god and solar culture institutor luminous but not fair-skinned. The successful combination of unusual culture and benevolence with both beard and a light skin is too much for coincidence. That this coincidence should have occurred several times, among Yellow-brown peoples of great empires and isolated tribes from Mexico with Yucatan to Colombia, Ecuador, Peru, Bolivia, and again on the nearest islands in the Pacific Ocean, is a little too difficult to believe, the more so since the European discoverers in Peru and Polynesia saw natives of the land with a whiter skin than themselves, and golden-haired individuals who were descendants of the gods—gods whose remains are probably found today in the Peruvian mummy caves of Paracas and among the *uru-kehu* of the adjoining ocean.

We began the present part of this book to see if there were any good reason to reject the most practical alternative that the Caucasian-like element in the complex Polynesian stock might have followed the natural ocean road down with the wind from South America. We knew that America had not been generally recognized as a centre of distribution of Caucasoid race elements before the arrival of Columbus. Our primary object was to consider whether the negative attitude towards the existence of Caucasoid or Caucasian-like migrants in pre-Columbian America was due to actual evidence against it, or merely to the absence of any obvious and urgent evidence for it.

We found that what we had ourselves suspected merely on the basis of indirect reasoning from facts observed in Polynesia, was already well known in Peru, where it had emerged spontaneously and existed in the shape of a yet unsettled problem. Instead of being new, the hypothesis that Caucasian-like individuals and Caucasoid traits had been present among the earliest American high-cultures was discussed among early explorers and chroniclers and subsequent students of art. The theory was not even new with Cortes and Pizarro, but was advocated in the early Aztec and Inca empires. Approaching the various channels available for information, native tradition, ancient portraits, preserved bodies, inherited peculiarities, and the psychological reaction on the American aboriginals of their meeting with Europeans, we found unified support of our theoretical assumption, casually even very strong arguments in its favour.

Those who defended the uniformity of the American race and the absence of Caucasian-like characters in pre-Columbian America were repeatedly driven from one hypothesis to another to account for existing evidence to the contrary. In view of the ample evidence at hand to support the Aztec and Inca tradition which tell us that European-like peoples lived in parts of America before the Spaniards, the burden of proof and explanation rests with those who feel that prehistoric America was strictly the home of Mongol types. In analysing the material presented in the foregoing pages, we have in every case attempted to discuss contrary suggestions also, whenever encountered.

Whereas subscribers to the theory of racial uniformity in pre-Columbian America generally concentrate on defensive measures, their most effective offensive arguments

seem to be embodied in two questions: How could a small Caucasian-like minority maintain any distinguishing racial characteristics when making a prolonged migration from Mexico to Polynesia through Central America and Peru, an area occupied by millions of Yellow-brown men? And who were they?

The first question may be answered simply by pointing to the Jews of Europe, or better still to the nomad gipsies. Certain people take pride in their own stock and refrain purposely from intermarriage with those who may impurify their own breed. We have definite evidence that the same desire prevailed among the aristocracy of some of the peoples under discussion. We know how the Inca rulers and their near relations claimed descent from their "Father the Sun" through Viracocha, their earthly creator. The first Cuzco Inca, Manco Capac, was married to his sister, Mama Ocllo, a custum common in the Inca dynasty, originating obviously in a pious desire to protect and preserve their physical inheritance that it might not disseminate through the millions of aliens among whom they had settled as rulers.

Garcilasso (1609 b, p. 309) has provided the following information on this Inca custom: "They say that as the sun was married to his sister, and had caused the same marriage to be celebrated between his children, it was right that the same custom should be preserved by the heirs of the kings. They also did it to ensure purity of the blood of the Sun; for they said that it was unlawful to mix human blood, calling all that was not of the Yncas, human. They also declared that the princes married their sisters, in order that they might inherit the kingdom as much through the mother as the father: for otherwise they affirmed that the prince might be bastardised through his mother. Such was the strict rule which they established respecting the right succession of the inheritance to the kingdom."

The migration into Polynesia must obviously have been led by a people whose rulers were at that early time as conscious of the need to preserve their racial inheritance as were the Inca. In Tahiti, for instance, where the first chief Tiki descended from the sun and similarly married his sister (Ellis 1829, Vol. I, p. 112), as did a series of his early successors, the same belief prevailed that the common people were human, whereas "only in the vains of the chiefly families did the blood of the gods flow..." (Weckler 1943, p. 26.)

Friederici (1929, p. 443) says: "Among the Polynesians brother and sister marriage was very widespread; it was especially common in Eastern Polynesia, as may be witnessed in the groups facing America, like Hawaii, the Marquesas and Tahiti. ... The reason given for this custom was nearly always the effort to maintain purity of blood..."

In the genealogies of the families of Hawaiian chiefs brother and sister marriages are known since the group was first settled; the offspring of such marriages were invested with higher rank and called Aliipio, taking precedence over brothers and sisters of other unions. (Fornander 1878.) The Marquesan genealogy consists of a long list of gods married to their sisters and representing the background of the local chiefs down to the time of the discoveries. The thirty earliest generations of such rulers are recorded as brothers and sisters; after this the ancient relationship is no longer observed. (Beckwith 1911—12, p. 309.) Likewise in the Hervey group (Beaglehole 1938, p. 377), and in the highly sophisticated culture of Rarotonga, brother and sister marriage took place for the specific purpose of perpetuating families of high rank. In short: "With a few exceptions, as in Tongareva, close marriages were favored by Polynesians." (Buck 1932 a, p. 24.)

It can thus be seen that at least the central aristocratic body of a migrant people, with such a view of their own divine descent and such an understanding of race preservation, could reach Polynesia after a long stay in Mexico and Peru without being entirely intermixed en route. In fact, the racial peculiarities of such a migrant minority could survive with a high degree of purity so long as the ethnic group in question had sole executive powers and could restrict their marriages to their own closed circle. On their periphery, raciel elements might well leak out to be engulfed in surrounding multitudes of other breed, but this leakage would not polute the nuclear group and its close followers. If, therefore, they desired or were forcibly compelled to change their abode, the mere geographical transfer would not necessarily affect the race, although parties left behind and women captured by the victors could well cause strains of their blood to persist among the victorious tribes occupying their former home.

From the evidence analysed above it would seem that the Caucasian-like elements were far more common among ancient embalmed mummy remains on the desert coast of Peru than they were found to be, as living persons, in the same locality at the time of the European Conquest; also that they were much more commonly found among live individuals in Polynesia than in Mexico and Peru. This is just what we should expect if the people under discussion had formerly had their centre of activity in early Mexico and Peru, but only up to a certain period, when they migrated with the wind and the sun to remain in Polynesia. The fact that the *uru-kehu* strain seems to have been much stronger among the *patu-pai-arehe* or other pre-Maori-Polynesian than among the historic island tribes is a natural consequence of massacres and expulsions following the migration wave which caused new royal lines and hegemonies to be established on the islands in the beginning of the present millenium.

We know how these newcomers from "Hawaiki" behaved when they invaded the already peopled islands some twenty to thirty generations ago. Confronting their predecessors, dark or fair, they usually killed the men, sparing only women and children. In the course of the following generations, the fair racial components, provided they were better equipped intellectually, could perhaps recover some rank and social standing, but never again their former degree of racial integrity.

An early American ethnic group, with genealogical pride and ancestor-worship sufficiently demonstrated through social isolation and close marriages, can thus move comparatively unmixed through foreign habitats—a rather familiar phenomenon among migrating religious groups in history. They could do so more readily down the isthmus or along the sparsely populated coasts of tropical America than others could do among the civilizations of Asia Minor, Southern Asia, or Europe. The strong point of the opposing view seems to be the second question: Who were these migrants?

In default of an immediate answer it has been tempting to drop the subject as untenable and vain. This is wrong. We have their portraits, hair-samples and traditions, and should attack the problem, not put it aside. If we ask for the origin of the ruins at Tiahuanaco, San Augustín, or Coclé, we again fail to get a satisfactory answer. But although we cannot identify their background, they are still there. It is certainly true that it is dangerous to draw extensive conclusions from fragmentary evidence. It is easy to be incautious in the way we use known facts in an attempted reconstruction of the unknown past. Yet, is it

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not equally easy to be incautious in the way we leave out of count available evidence? It would seem that the cautious attitude rightly advocated by most contemporary scholars should apply not only to the part of the available information of which we make use, but also to that part we put aside simply because we cannot explain it or make it fit into the current picture.

When we find a Caucasian-like profile sculptured on the back of a prehistoric stele in southern Mexico (Plate XVII), it is widely accepted as a strange and undeniable fact, but it is put aside and no deductions are drawn from it. The question is whether caution of this kind does not amount to negligence. Who was depicted on this stele and in other American portraits of the same category? Certainly no personified light ray or stylized supernatural being, but an aristocratic Caucasian-like human, seen by, or represented by, the early American people who created these works of mature artistry and high cultural standing. Since we are apparently dealing with a locally extinct or departed race element, *this* may be the answer to our question: *who* were the migrants.

It is not necessary to carry the discussion further. An ethnic group of the same peculiar Caucasian-like stamp is traced from Polynesia back to pre-Inca Peru and the earliest culture levels of Mexico. We are getting back to periods antedating by centuries the earliest settling of Polynesia. The chronological seniority of the Olmec, Early Chimu or Paracas remains over the Polynesian island culture is sufficiently established to exclude a trans-Pacific origin of the American stock under discussion. Such a migration route is also entirely incredible in view of the practical barriers of distance, winds and currents. It may therefore be safely assumed that we are dealing with people whose ancestors had followed one of the only two well established and fully natural entrance routes to prehistoric America—the continental route from the north, as resorted to by the Yellow-brown race, or the marine route from the east, as used by the 15th century Europeans.

The practical feasibility of following the northern continental route is generally recognized and needs no further comment. The discovery of stray Caucasoid traits like heavy beards, aquiline noses, white skin, and reddish brown hair on the coast of British Columbia and its islands shows that such non-Mongoloid traits can develop out of the Yellow-brown race, or else spread through diffusion south or north through purely Yellow-brown territory adjoining the Asian gateway.

Yet one cannot help feeling that, natural as it is to look to the other side of the Pacific for the origin of the great majority of Yellow-brown Americans, it would seem as natural to look across the Atlantic for the vague Caucasian-like strain among them. The former may represent a continuous and therefore powerful human migration chiefly by land, the latter may represent mere stray craft blown across the sea by trade winds and ocean currents. It is not my intention unduly to stress this point, which has no bearing on the present problem. It would be wrong, however, to ignore entirely the practical feasibility of an early drift voyage across the tropical Atlantic. Few anthropologists seem much concerned about the fact that whereas Peru and Indonesia represent the antipodes, with exactly half the world between them, Africa and South America are separated by only 1700 miles—not even half the width of Micronesia—and with the most favourable conditions for a westward surface drift.

A voyaging party along the west coast of Africa, either from the south or from the

north, has automatically ventured into either the South or the North Equatorial Current, both of which flow straight across the Atlantic to Yucatan and the extremity of the Mexican Gulf. They are in direct company with the eternally westbound trade winds. Venturesome early explorers, or lost weatherdriven craft off the Canary Islands or the West African coast, would therefore be likely to be drawn away from the Old World and end up where Maya and Aztec history begin.

There is a popular but erroneous belief that black people, if anything, would be all that Central America could receive with the African current in prehistoric times. Let us not forget that there are vestiges of a former people, like the Kabyle and other tribes in the Atlas area of northwestern Africa, who still occasionally have naturally red hair, blue eyes, beard, hooked nose and light skin. But were such people seafarers, did they venture off the coast of West Africa, out of the sight of land or into the grip of America-bound wind and current? And did they travel the sea with such a neolithic culture as would enable them to land in America without knowledge either of iron or bronze, and allowing the subsequent generations to remain ignorant of iron even till the time of Columbus?

We have evidence to answer all this in the affirmative. The Canary Islands lie just in the drifting water-masses we speak of. A drift from their shores to the West Indies is 1500 miles shorter than the drift of the Kon-Tiki raft expedition in the same natural conditions. It furthermore agrees with the natural route of Columbus who, like those in his wake, used the Canary Islands as a port of call on his voyage to America. When the Norman and Spanish conquerors reached the Canary Islands a few generations before the discovery of America, they found an aboriginal population part of which was of Caucasian race, light-skinned and tall, with blond hair, blue eyes, hooked nose and beard. (See Plate XXXIII **1**.) The origin of this people creates another problem for the student of pre-history and the oceanic spread of early peoples,[1] but they must certainly have come to the islands in seaworthy ocean-going craft. And when found in the late mediæval ages they still retained their neolithic culture.

Any people living on the shores of the Atlantic, with vessels and maritime ambition capable of leaving racial vestiges on the Canary Islands, *may* run the risk of setting similar migrants or castaways ashore in the Gulf of Mexico.

One may look east or north—or even for a local evolution—when searching for the origin of the Caucasian-like element in aboriginal America; it is incautious only to close one's eyes to their existence. In the present work it will be safe to refer to all the widely diverging ethnic groups which were at home in the New World before Columbus as aboriginal Americans, though it is a known fact that no American tribe or nation has an ancestry fundamentally autochtonous to its own domain. From a Polynesian point of view the Inca and the pre-Inca alike are strictly natives of America.

[1] This oceanic people had no satisfactory explanation of their own origins; on Lanzarote they called their own island Maoh and referred to their own race as Maohreri. (Wölfel 1940, p. 75.)

PART VI

STONE HUMAN STATUES AND MEGALITHIC CULT-SITES

STONE HUMAN STATUES AND MEGALITHIC CULT-SITES

The stratification of wood-carving and megalithic art in Polynesia

The physical aspect of a country has usually some influence on the local culture. On the arid slopes of the Andean highlands, where forest was scant or absent and rock formations were abundant, stone was likely to become the dominant material in plastic and monumental art. This does not mean that all local tribes, or alien tribes in any rocky desert area, would be apt to raise monoliths and excel in carving stone, but it means at least that an immigrant stone-shaping culture would find ample encouragement from the environmental conditions to continue the former custom.

Entirely different was the geographical lay-out in the verdant forest country of the Northwest American coast. Giant trees and wood of almost any desired quality surrounded Yellow-brown man wherever he settled along this island-dotted coast. Wood naturally became—or remained—the chosen material for local house-construction, fortification, and all major aspects of building and monumental art. What stone was to the art and general culture of early Peru, wood was to the Indians of Northwest America.

If our assumption is correct, and Peru supplied Polynesia with its earliest inhabitants, while the original island culture was later overrun by the arrival of war canoes from Northwestern America, this mingling of cultures on the islands ought to have left behind it a certain definite stratification. This tallies to an astonishing degree with actual conditions in Polynesia.

The Maori-Polynesian population which arrived last and has completely dominated Polynesia in historic times is known on most of the islands for its conspicuous skill in wood-carving. We have already mentioned how some Polynesians excelled in decorating their canoe-parts, paddles, house-posts, mortuary columns, household dishes and various artifacts by wood-carving of outstanding quality. In this sphere Polynesian art ranks with that of the world's leading civilisations, and it was just here that we found detailed and comprehensive parallels and resemblances to the culture of the Northwest Indians. The Maori-Polynesians of historic times were not stone-workers. Generally speaking, their interest and skill in stone-shaping was, as among the Northwest Indians, limited to the forming of neolithic adzes, polished stone clubs and pestles, an occasional small household image, or minor ornaments or artifacts. With these and a few other exceptions, we may say for the whole of historic Polynesia what Archey (1937) stressed in speaking of the New Zealand Maori: "Where stone was used it was only crudely worked—obviously wood was the sculptors chosen material."

Yet we find, inside the present habitat of these wood-carving Polynesians, some of the

most outstanding and impressive carved stone monuments ever raised in prehistoric times. The Polynesians have not been able to explain satisfactorily their origins, but they assert that the carved stones were not recent products but dated from the earliest era of their ancestral history (Tonga), or more often, that they were even the products of other people who preceded their own forefathers on the islands. (Easter Island, Marquesas, Hawaii.)

If the earliest Polynesian era had its roots among the stone-shaping cultures of arid Peru, and the subsequent conquerors were descended from the wood-carvers of the Northwest American forest lands, then this remarkable change or stratification in Polynesian material culture is but a logical consequence of geographical conditions in two American areas.

People and cultures may decay, become extinct, be expelled or absorbed, and yet never forgotten provided they built monuments in enduring stone. From the point of view of Polynesian investigations, it is a fortunate fact that the earliest and least known island invaders, rather than the existing Maori-Polynesians, were those who left stone monuments behind as enduring evidence of their cultural condition. For to trace and identify their ancient routes and relationships we need road-posts of such out-standing size and material that they do not disappear in the multitude, or decay in the course of centuries amidst conquering tribes and cultures. It is therefore natural first to take stone statues and other megaliths into consideration when we now attempt a more concrete and penetrating analysis of the relationships and migration possibilities of the original Polynesians. Culture-plants, racial traits, creeds and customs and other perishable but inheritable material have not, like the ancient stone monuments and edifices, been handed to us direct from the hands of their true originators.

Comparative study of American-Polynesian megaliths impaired by specialization

The tendency among modern anthropologists has been to regard the New World as a kind of blind alley with only a narrow entrance in the extreme north, through which primitive hunting and fishing tribes were able to come in on a one way trek from Asia. The result is that every sign of higher culture in the New World has been considered as having evolved locally and is regarded as an American phenomenon without outside inspiration, still less to have passed any inspiration on to the outside world. It is, therefore, as unusual for a student of Peru to obtain information about conditions out in the Pacific as it is for a student of Polynesia to take interest in Peruvian archaeology. This attitude is perhaps most natural and comprehensible in an Americanist, for the following reasons: It is difficult to study the abandoned stone statues and edifices of the Tiahuanaco culture without seeing the original connection with the Pukara monoliths a little farther north on the same plateau (Kroeber 1944, p. 101), and, in immediate conjunction with these, the stone sculptures and remains of the Chavín culture still farther north in Peru (Markham 1910). In Chavín, again, one finds an evident relationship with the remains at San Augustín in Colombia, in the extreme north of the Andean chain (Preuss 1928), and from here it is not far, either in distance or in artistic style, to the ancient monoliths and culture-sites of Central America (Stirling 1943, p. 1). In other words, the megalithic sculptures of Peru

have deep and wide roots within their own continent, roots which lie in America far below the oldest cultural epoch of Polynesia—and far outside its practical range. From the point of view of an Americanist, therefore, Polynesia is superfluous as a link in the reconstruction of the local cultural growth of the New World, and as a rule it is merely found interesting to note, in a general way, that the inhabitants of some of the isolated small islands in the most easterly part of Polynesia have also learnt to carve monoliths like their neighbours in tropical America. From an Americanist's point of view it thus became the problem of *Polynesian* students to find out how human beings and high-cultures could have come into existence out in these cut-off island dwelling-places.

Nevertheless, certain Tiahuanaco experts have found it difficult entirely to ignore the possibility of some kind of connection between the stone sculptures inside their own geographical field of studies and a series of analogous remains on some of the islands in the ocean directly off Peru. Posnansky (1914, p. 13), who, through life-long local studies and excavations perhaps knew the Tiahuanaco sculptures better than anyone else, was led to entertain fantastic theories of geological changes in the Tiahuanaco period, because, *inter alia*, he maintained that the megaliths on Easter Island, and certain other islands still farther west, "could not have developed on their own". In his monograph on the Tiahuanaco site (*Ibid.*), he refrains from comparisons with other areas, but says with regard to the Pacific Islands: "Most of the structures of the aforesaid island-groups stand technically in intimate relation to those of the Andean highland."

The local Peruvian archaeologist, Valcárcel (1935 b, p. 27), well acquainted with all aspects of Andean megalithic art, had the same difficulties in ignoring the strong parallels between the great-stone shaping art of his own country and that on some of the nearest islands in the Pacific. He suggests that a conscientious analysis of the Easter Island stone sculptures, when compared with the Andean monoliths found from Colombia (San Augustín) to Bolivia (Tiahuanaco), may provide American pre-history with guide-posts that could outline the early cultural currents of pre-Inca Peru.

Beyond these and many similar references to Pacific island monuments no Peruvianist seems to have gone. They had neither reason nor need to look for an extra-American origin of their local megalithic art. The awaited comparative study was thus left open for the student of Polynesia.

In Polynesia, meanwhile, we have seen a one-sided tendency to turn attention in the opposite direction, towards Asia. One of the principal reasons for this is clearly the repeated affirmations of Americanists that the cultures of the New World were totally unable to exercise any influence overseas on account of the local lack of ships or other seagoing craft. (See Part VIII.) For instance, a leading Polynesian archaeologist like Emory, (1933, p. 48) who had suspected that certain aspects of the stone-shaping technique might have been brought to eastern Polynesia by early Peruvians who arrived on balsa rafts, admits that he was gradually caused by practical considerations to modify this opinion because, he says, he had later learnt from competent quarters that: "Balsa rafts become waterlogged in a few days if not taken out of the water to dry." (Morgan 1946, p. 80.)

While the local experts in Polynesia and Peru have each concentrated entirely on the study of megaliths of their own areas, anthropologists with a more general field of activity have not been able to avoid comparing the resemblances between these two contiguous

regions. It may, indeed, be of interest to give some examples illustrating the commonest reactions.

Allen (1884, p. 251) expresses a very common opinion when he says, rather carefully, about the statues at Easter Island: "If it is merely a coincidence that these wonderful antiquities, so closely resembling in character those of Peru and Central America, should exist *on the very next land* to the New-world, it is surely a most curious one, . . ."

J. M. Brown (1924, p. 257) goes further: "Since the great-stone work of Easter Island and that of Peru have begun to be compared there has been a tendency on the part of those who know both to find a connection between them." Looking for a possible route of oceanic transfer that could satisfy such a prehistoric connection between Peru and the said island, he writes (*Ibid.*, p. 267): "We may rule out Easter Island as the medium of this influence, although there is so strong a resemblance between the work of the two areas. For it would not be easy or natural for voyagers from so far north to reach the American coast; to make sure of reaching it they would have to get far to the south into the latitude of the constant westerlies." He thus overlooked the alternative, that voyagers with the constant *easterlies* could get a fair wind from Peru *to* Easter Island, or to any other Polynesian habitat, and he passed at once to speculating on local land submergence.

Krämer (1906) took a different approach and observed what he termed "the American Indian type" depicted on some of the ancient statues and statuettes in stone and wood on Easter Island. He adds: "By this I do not intend to say that the existence of these lonely stone giants on Easter Island is directly due to an American influence. But undoubtedly another race existed here beside the Polynesian; the question is merely whether that race arrived from the east, from America, or from the west, from Melanesia." The author cautiously drops the subject after these alternative suggestions, and leaves it to others to wonder how the American Indian type could possibly have come to Easter Island from Melanesia.

Subscribing to the same formerly widespread but now strongly disputed belief that Easter Island was first settled by Melanesians,[1] St. Johnston (1921, p. 286) wrote: ". . . I still think that the ideas were too grand for such a [Melanesian] people, and that there was possibly a guiding influence from the east, from Peru. Had the ideas been Melanesian solely, why do we not find similar remains, of similar grandeur, in any single island of 'Melanesia', and if the idea had been Polynesian solely, why do we not find similar traces in Central Polynesia? Whereas we *do* find vestiges not unlike them in Peru." After this apparently logical reasoning, the author seems to have become confused in his attempt to adapt his conclusion to the current doctrine of a west-to-east migration in the Pacific, and he quickly adds that "any American influence in the Pacific can after all be merely regarded as a 'backwash' . . ."

Among the diversified efforts to find a logical explanation of the suggestive similarities between early Peruvian and Polynesian stone statues and other megaliths, those of Rivet (1926), and Imbelloni (1926 b) stand out in having apparently acquired some followers. Observing what Rivet (*loc. cit.* p. 143) terms "the remarkable similarity that exists between the pyramids, the megalithic constructions and the stone statues of Polynesia and America",

[1] Strong arguments against a Melanesian settling of Easter Island have more recently been presented by Shapiro and Métraux (1940).

this group of diffusionists finds the theory of Polynesian landings in Peru, with all the chronological complications thus involved, to be a sounder explanation than the proposal of pure coincidence or equability of the human mind.

A suggestion presented by J. T. Thomson as long ago as the last century has apparently made little or no impression. Without further explanation or any specified support for his assertion, Thomson (1871, p. 45), in his "Ethnographical Considerations on the Whence of the Maori", held: "The only place in Polynesia in which American remnants have been found is Easter Island; these consist of huge images, but the people who constructed them have passed away, and have been succeeded by a race having a common origin with the Maori, Sandwich, and Marquesas Islanders, all referable to Hawaiki."

It is worth noting that while some observers have found it necessary to propound the most diversified theories to explain the striking *resemblance* between the stone statues of Eastern Polynesia and South America, others have had the greatest difficulty merely in attempting to explain the *origin* of this strange cultural outcrop on little Easter Island. If the idea occurred locally, why did it occur sporadically on widely separated islands and only on those which were closest to America? And if it was brought from Asia, why was it not found anywhere on the immensely long migration route through Micronesia, Austro-Melanesia, and the whole of Western and Central Polynesia?

The last consideration alone is enough to enable one, on purely geographical and practical grounds, to declare that there is no reasonable possibility of the inspiration having come with a west to east migration across the Pacific. This obvious fact, indeed, has never been a subject of doubt or discussion among Polynesianists. Emory (1928, p. 118) has emphasised that not even small portable stone images have been observed in Central and Western Polynesia or in Micronesia, and that extremely few occur in Melanesia. Not till one has gone many thousands of miles against the wind, from Asia to the Tubuai and Marquesas groups, does one come upon the great monoliths in human likeness, and these increase in importance on the last island—the nearest one to Peru—Easter Island.

A migration from Indonesia to these eastern islands would require centuries of exploring voyages with settlements, population pressure, wars and fresh migrations. If the migrants had taken with them the custom of carving in stone and erecting monoliths in human likeness, a series of these would be found from settlement to settlement eastward across the Pacific. But they are not found. They begin and cease at the opposite end, and have their highest development on Easter Island, a few weeks from the coast of South America. From here they spread down wind and current wherever there is stone as raw material in the eastern extremity of Polynesia, to peter out and disappear before the longitude of the Society Islands is passed.[1]

This geographical distribution demonstrates plainly enough that the monolithic statues in Eastern Polynesia cannot be inspired from Asia, but only from South America, if they are not local inventions. Before considering the last-named possibility, we will see what background the South American megalithic cultures can offer to Polynesian research, so long as it is clearly understood that not one single generation, but just weeks, were necessary for a migration from this geographical area to Eastern Polynesia.

[1] Such crude marking of a face as on the 'Kambak'-stones of New Guinea (Riesenfeld 1950) cannot be classed as human busts of this category.

Megalith sites and cultural diffusion down the Andes

The custom of carving and raising large stone statues, and the ability to do so, present perhaps one of the most striking and consistent peculiarities common to nearly the whole series of extinct American civilizations. In a few exceptional cases where stone statues and stonework are scant or absent, as among the adobe-making Chimu cultures, native traditions vividly describe important stone busts worshipped by the migrant generation of their ancestry. (Balboa 1576—86, Bk. 3, Chap. 17.) Among the many Americanists who have pointed to this noteworthy fact is Stirling (1943, p. 1), who says:

"The practice of carving and erecting large stone monuments was one of the conspicuous achievements of the aborigines of tropical America, from northwestern South America to and including a considerable area of southern Mexico. In the south this pratice was most common in Peru and Colombia. From this region northward, the distribution is more or less continuous ... Although the art styles employed and the nature of the monuments differ considerably through this rather large region it seems evident that a certain interrelationship exists, an understanding of which should cast considerable light on the chronologies and pre-Columbian cultural exchanges between the two continents, especially since the monument-distribution area involves most of the high-culture centers of the New World."

The distribution of stone human statues in South America ends in the south with the area that was under Tiahuanaco influence south of Lake Titicaca; in the north it has no marked borders, as it extends along the Andes to San Augustín in Colombia, whence through Coclé in the bottle-neck of Panama, it is geographically linked with the rest of the American distribution area represented by Central America and Southern Mexico.

The prominent Peruvian archaeologist Tello (1928, p. 283) suspected a direct connection behind this coherent trail of megalithic sculpture down the Andes: "Perhaps it would not be too venturesome to affirm that the area of the Archaic Andean culture, revealed by its architecture and sculpture, extended on the south to Tiahuanaco and on the north to San Augustín in Colombia, for some of the structures and sculptures of these places present certain analogies to the monuments which have served to characterize this culture, and to define the first stage of the Andean civilization."

San Augustín, at the northern end of this Andes system, represents the façade towards the old high cultures of Central America. Like Tiahuanaco, we know this culture only through the remains which its prehistoric creators have left behind. At San Augustín these consist in the main of over three hundred different stone sculptures and monoliths in human likeness spread over a fair-sized cult site in the forests at the sources of the river Magdalena. On the arrival of the Spaniards in 1538 San Augustín was just a collection of abandoned prehistoric monuments.[1] The primeval forest has overgrown this former centre of cult and culture to a degree which indicates a considerable age.

[1] In his paper on "The Archeology of San Augustín and Tierra-Dentro, Colombia", Alba (1946, p. 859) writes: "Neither the *Andaquí* who dwelt in the San Augustín region nor the *Páez* living in Tierradentro at the time of the Conquest were aware of the archeological remains in their territories. Likewise, the culture of these Indians gives no indication that they might be the descendants of the peoples who left these monuments. Ultimate identification, then, of the builders of San Augustín and Tierradentro must await broad comparison throughout the Andean region, and above all more excavation."

Bennett (1949, p. 80) says: "By analogy with the stone sculpture of Peru and Central America, San Augustin falls into the Early period in Colombia." And (*Ibid.*, p. 78): "The rolling forest-covered hills at the headwaters of the Magdalena River do not appear to be a favourable region either for the support of a large population or for the development of an advanced culture. Yet here are found the San Augustin stone carvings and temples that represent the earliest known remains in Colombia."

In a passage based on an interesting piece of purely geographic logic, the same author (*Ibid.*, p. 21) shows that San Augustín is right in the natural track of prehistoric migrants from Panama to the Andean highlands. Land-hunters and collectors migrating to South America via Panama could easily enter the Andean highlands by following the valleys of the Cauca and Magdalena rivers, both of which begin in the Andes and flow from south to north. Some groups could have turned off eastwards into Venezuela, but further expansion in that direction would probably be blocked by the Amazon jungle. Land migrants along the Pacific coast of Colombia and Ecuador would also run into mangrove swamps and jungles, whereas an ascent of the Magdalena river to San Augustín would from there on take the southbound wanderers into open highlands which also offered a reasonable quantity of game and other food. Once up there, there would be no barriers to a continued southward migration along the high plateau to Chavín, Pukara and Tiahuanaco. Leicht (1944) has shown that other parties may have pushed by sea along the coast, and that these two branches may have joined in the coast-bound mountain valleys near the Chavín and Chimu areas of North Peru.

We may note that a leading authority on San Augustín, Preuss (1928; 1931), who has alone discovered and excavated about hundred of the local stone statues, stressed (1928, p. 234) that the most evident connections with that prehistoric cult site were to be found in Chavín, in the North Peruvian highlands. Chavín, or Chavín de Huántar, is another early and abandoned pre-Inca cult site of the Andes, where early megalithic architects have left behind more carved stone slabs and a number of anthropomorphous stone statues. Preuss also shows how a monolith, representing what seems to be a sun-god holding a vertical rod in each hand, is common to San Augustín and Chavín and reappears again as the central figure carved in relief on the monolithic Gateway of the Sun at Tiahuanaco.

With the Magdalena river and San Augustín marking a natural entrance route for southbound migrants from Central America, and with San Augustín again linked up geographically and archaeologically with the early Chavín high-culture of North Peru, we possess a gateway from the north to the early cultural horizon of the pre-Inca domain. For, although the inter-Andean chronology is yet uncertain and open to much discussion, Chavín seems either to hold the important key position, or else at least to be basically involved in a cultural relationship to the various Andean civilizations.

To show in how unsettled a state the developing Peruvian archaeology still is, we may briefly revive the current opinions on this subject. Markham (1910, p. 392) began the first systematic comparison between the extinct Andean cult sites of Chavín in North Peru and Tiahuanaco in the former South Peru (the present Bolivia). He found so much resemblance between the stone work of these two pre-Inca cultures that he believed that if the stone monument at Chita in the valley of the Vilcamayu and that at Cuzco had

not been deliberately destroyed, it would perhaps have been possible to trace the direct transition from the Tiahuanaco to the Chavín style. His conclusion was: "The result of a careful examination of the carving on the stones is that the same general idea prevails on both, that they represent the genius of the same people and the same civilization though at different periods, the stone of Chavín being the latest."

Tello (1928) took the opposite view. He held that the Chavín culture was more basic and that it was Tiahuanaco in the south which had received a cultural inheritance from Chavín. He extended the comparison as far north as San Augustín.

Means (1931) did not find the artistic style of the Chavín culture to be basic, but rather conventionalized, and he suggested that Chavín represented an amalgamation of impulses, partly from the early Chimu and Nazca cultures on the coast and partly from highland Tiahuanaco. He agreed that the stone carving of Chavín and Tiahuanaco must have derived from the same underlying concept, and stressed that the apparent similarity lay in the fundamental ideas and style of cutting and treatment rather than in the details of surface pattern and design.

Bennett (1934, p. 485), in his Tiahuanaco study, confirms that the theory which makes the Chavín and Tiahuanaco monoliths elaborations of a basic, widespread culture "has been confirmed many times", while he finds that the problem remains "as to whether Chavín is, historically speaking, influenced by Tiahuanaco culture or whether the reverse is true." [1] Later (1942; 1943; 1944), after thorough studies of Chavín and adjoining culture-areas of North Peru, he emphasizes that the recent discoveries by Tello, Hoyle, Willey, Rowe, and others "show that the Chavín style itself is not limited to the north highlands, but appears as an isolated style or a design influence throughout most of Peru. . . . It is not certain that the site of Chavín represents the centre of development and distribution of the style." (1943, p. 323.)

He stresses (*Ibid.*, p. 325) that the Pacific coast now has "numerous Chavín sites", and that Chavín as a style and probably as a period must have been widespread, extending from Piura on the far north coast of Peru to Paracas on the south coast, and from Chavín in the northern highlands probably to Pukara north of Lake Titicaca. He compares this wide distribution with the historically known dominance over all Peru in the Inca period, and again with that of Tiahuanaco in pre-Inca time, and concludes (*Ibid.*, p. 326): "The dominance and distinctiveness of Chavín style, the antiquity, and the known wide distribution definitely suggest that we must add still a third pan-Peruvian period to the Uhle sequence in Andean chronology."

Kidder (1943) opposes this view of the wide and unified expansions in pre-Inca Peru, but Kroeber (1944, p. 115) accepts it, saying: "Specifically, there have now been established three ancient cultures which were almost pan-Peruvian—Inca, Tiahuanaco, Chavín . . ."

Pukara, which Bennett considers to be at the southern end of this Chavín expansion, is another extinct and unidentified megalithic cult and culture site of the pre-Inca age. It is located north of Lake Titicaca, in the department of Puno. Pukara is best known for its megalithic enclosure and a great number of stelae and stone human statues discovered on and below the surface of the ground. While Tello showed the resemblances between

[1] Bennett (1949, p. 193) also says: "There are many indications that Tiahuanaco was built at intervals and that much of it was never completed."

Pukara and Chavín, Kroeber (1944, p. 101) stresses closer resemblances between Pukara and Tiahuanaco.

Kidder (1943 p. 38) describes stone statues (and statuettes) from a wide area of the northern Titicaca basin, and shows that they often display resemblances to Tiahuanaco stone sculptures, but on the whole even more to those of Pukara.

Rowe (1944) describes for the first time the pre-Inca Chanapata culture in the Cuzco area, located between Pukara and Chavín, and we learn that it shares traits with both these two Andean neighbours as well as with Tiahuanaco.

Valcárcel (1935 b), who for years has probably contributed more to our knowledge of the Pukara site than anyone else, reverts to Tello's opinion that Pukara must be connected somehow with the whole megalithic sequence of analogous cult sites from San Augustín and Chavín in the north to Tiahuanaco in the south. He adds, as stated, that only when this whole interrelated complex of Andean megalithic art is compared also with the remains on Easter Island can we achieve a full understanding of the spread and sequence of culture in this area.

Although many attempts have been made to point out striking correspondences, both in general appearance and in certain details, between Chavín stone carving and that of early Mexico, Central America, and Ecuador (Joyce 1912, p. 177; Lehmann 1924, pp. 35, 40; etc.)[1] yet it would seem safe to conclude from existing opinions that Chavín is perhaps most strongly linked with San Augustín to the north, Pukara and Tiahuanaco to the south, and the Chimu area on the coast below.

When we now come to the last and southernmost of these great and long abandoned cult-sites in the Andes, Tiahuanaco, we find opinions to be just as varied. Those who follow Uhle believe that the Early Chimu and Early Nazca antedate Tiahuanaco, and suggest that influence was originally brought to bear upon Tiahuanaco from the Pacific coast down below.[2] Those who follow Tello believe instead that Chavín antedates Tiahuanaco and represents the centre which sent the cultural impulses down south to the Titicaca area. Those who follow Posnansky make Tiahuanaco itself a centre of such antiquity that cultural inheritance from other sites cannot even be considered.

Montell (1929, p. 15) points to the numerous and often quite absurd theories which have been presented since the time of the Conquest concerning the origin and background of Tiahuanaco, without the problem yet being definitely solved. Karsten (1938, p. 28) goes further, and expresses the opinion that in spite of the many existing theories, the Tiahuanaco problems will probably never be satisfactorily solved.

[1] Joyce, and many with him, have also seen strong resemblance between elements in Chavín and Nazca design; and Bennett (1949, p. 124) claims that the Chimu area and coastal North Peru in its B. C. 'Cultist Period' includes many local cultures and sites which, in spite of their wide distribution, are linked by the Chavín style horizon. He brings Ancon into this relationship with Chavín. (1949, p. 97.)

[2] Means (1917) modifies Uhle's view in proposing that the early era of Tiahuanaco (Posnansky: Tiahuanaco I) was probably contemporary with the Early Chimu and Early Nazca cultures on the coast, but that a subsequent Tiahuanaco era (Tiahuanaco II) no less probably derived at least in part from the Early Nazca. He dates the Tiahuanaco I period from the second century B. C. all through the first half-millennium A. D. while the Early Chimu and Nazca cultures arose from the archaic on the coast below. At the end of this period the expansion occurred, bringing the highland and coast cultures into contact with each other, and resulting in the rise of the Tiahuanaco II empire. If Means' theory is right, it is interesting to note that this expansion and unrest in Peru roughly coincides with the peopling of Eastern Island and Polynesia about 500 A. D.

The ruins of Tiahuanaco are located in the highland plains of the present Bolivia, some twelve miles south of Lake Titicaca. The site includes the most imposing pieces of megalithic art and architecture in early South America, and represents one of the principal cultural centres of the New World. Besides the megalithic temple enclosures, the semi-artificial pyramid, and the monolithic gateway, one of the most noticeable aspects of the Tiahuanaco cult-site is the great number of anthropomorphic stone statues which have been carved and raised by the unidentified local settlers. The number of these statues was considerably larger at the time of the European conquest than today, since many have been deliberately destroyed and others mutilated, while some have been removed for preservation by the Bolivian authorities, or placed as curios at the entrance to the nearby village church. Again, through excavations, a couple of anthropomorphous statues have more recently been recovered from underneath the debris of the ruins. Bennett (1934, p. 460) lists some thirty Tiahuanaco statues still known, and shows that Father Diego de Alcobasa describes many others, not identifiable among those known today.

Bennett, in the final conclusions to the same work on the Tiahuanaco site, shows that it seems to have been the centre—perhaps chiefly a ceremonial centre composed of an aggregation of ecclesiastic constructions—of a pre-Inca highland culture the influences of which reached right down to the Pacific lowlands and are traceable all along the coast. He shows (*Ibid.*, p. 490) how the Tiahuanaco style spread throughout much of Bolivia, Peru, Chile, and Argentine, and that it reached as far north as to the Pacific coast of Ecuador, where the Tiahuanaco style can be seen in the carving on the edges of the stone seats and carved slabs of Manabi. This, we may recall, is the locality where the Viracochas from Tiahuanaco were remembered as having assembled before they departed into the open Pacific.

Bennett finally emphasizes that archaeological studies in the early Peruvian strata must allow for a considerable interplay of cultures, for archaeology shows that llama products, originating only in the highlands, had been available on the coast since the earliest times, a definite proof of the great antiquity of barter and contact between highlands and coast. He shows that although the individual styles are often geographically localized in the Andean region, this ought not to distract the student's attention from the fact that "the problems of Peru cannot be solved from one locality."

If nothing more can be considered proved today, it is at least safe to note that, underlying the local styles and surface pattern which readily distinguish the different culture-centres of aboriginal Peru from one another, there is to be found a continuous thread of basic and fundamental unity in idea and desire, which runs now here and now there between the megalithic cult sites of the Andes, and sends impulses out to nearly all tribes and culture-areas in the highlands as well as down on the coastal plains. Chavín remains as a geographical stepping-stone between San Augustín and Tiahuanaco; but whereas Tiahuanaco represents a southern limit of the megalithic expansion, with nothing to fall back upon further down the continent, so did San Augustín represent the South American gateway from the Panama Isthmus, with the whole culture area to the north whence it could naturally draw inspiration.

The abandoned megalithic cult sites, with their stone statues, remind us to-day of deserted islands wich had once been centres in a sea of vivid cultural exchange and

sudden progress. In America aboriginal high-cultures never arose far from abandoned ecclesiastic-sites containing megalithic monuments such as these, nor do we ever find a single cult site of this or a similar nature in any area outside the limited inter-tropical area of American civilizations. It is equally certain that none of these megalithic cult-sites were served by any known group of historic Indians, and that no tribe was busy sculpturing and erecting the said stone human statues when Europeans first arrived.

The stone men as ancestral figures

We have seen in Part V how native memories and worship of a migrating hierarchy with beards and light skin are intimately associated with the same limited geographical area, a memory which is borne out by the features on a few of the portraits depicted by the ancient sculptors. We saw that such Caucasian-like people were remembered as the original occupants of the Tiahuanaco site, and that their supreme priest-king had ordered the stone statues of Tiahuanaco and elsewhere in the Titicaca basin to be raised as representing the ancestors of the various tribes of the Collao. They are thus most likely to represent ancestral figures, and were idols and gods only to the extent that the religion instilled by the hierarchy of the sculptors was one of ancestor worship. But so far as the hierarchy itself was concerned, their own ancestors take mythical shape in the very morning of time when the lineage of kings becomes identified with a solar creator.

It is interesting to note that Kidder (1943, p. 38), in his archaeological survey of early stone human statues around the northern part of Lake Titicaca, found in a wide variety of forms resemblances both to Tiahuanaco and Pukara, for which reason he suggested that: "... individual sculptors, or groups of sculptors, could have travelled about in the Collao as specialists. This is mentioned to make clear the lack of an assumption that sculpture was *always* the product of local cultural inspiration."

At Pukara also native traditions were able to tell us that the local statues were ancestral figures. The first mention of these stone figures also dates from the time of the discoveries. Sarmiento (1572, p. 30) was told by the natives in Peru that according to their legends the monuments at Pukara represented the first human beings to come there as immigrants after *Unu Pachacuti* (the deluge) in their original country. Viracocha made stone statues of these migrants as a memorial of that event.

Referring to the conspicuously wide dispersal of stone statues in the megalithic cult sites along the Andean chain, the Peruvian archaeologist Valcárcel turns his attention to the Indians' own legends, which have survived with these monuments down through the ages from generation to generation. He remarks (1935 b, p. 27): "Wherever Wiracocha proceeded, human stone statues ('anthropoliths') appeared from caves and hills, founding families and villages, now on the borders of the great lake, now in the basins of the Collao or in the smaller valleys of the mountains. Men of stone were first made, from whom the others descended; in stone they also immortalized their religious symbols. Along the whole extension of the great Andean highlands, from Titicaca to San Augustín in Colombia, the stone sculptures are found dispersed, testifying a certain unity of art and conception." He adds that only when the statues on Easter Island are also examined in connection with this whole series of Andean anthropoliths: "The stone men will be found to resume

their march to mark out the route of the aborigines, and the intercrossings between the avenues of contact between the different groups."

Independent evolution behind Polynesian stone statues unlikely

With a trail of anthropomorphic stone statues from early Mexico down through Peru, we may well agree with Allen in his comment that their reappearance on Easter Island, the very next land to ancient Peru, is at least a most curious coincidence. Stone giants in human form are not very commonly carved and raised among the aboriginal peoples of the world, it is a feature not even general to megalithic cultures. Thus, as McMillin (1927, p. 218) pointed out with regard to those of Tiahuanaco, they represent a class of sculpture which seems to be entirely lacking among European ruins or vestiges of comparable culture.[1] Now, when we proceed to a comparative survey of the Andean and Polynesian stone statues, it may first be wise to consider whether the idea and the technical and artistic ability are likely to have come independently to the aborigines of these two East Pacific habitats.

We have already seen that the limitation of the statues to the most easterly islands of Polynesia proves that the custom cannot have been carried from island to island by an Asiatic migration across the Pacific. Micronesia and Western Polynesia leave no gateway open for inspiration from the west, but Easter Island has a most provocative location as a gateway to Eastern Polynesia from Old Peru.

There is a whole series of strong and compelling reasons for believing that the statues in eastern Polynesia are the result of foreign inspiration rather than of local evolution. Firstly, the archaeology of the islands where they have been raised, like Easter Island, Pitcairn, the Marquesas, etc., show no local signs of experiment and evolution in method and skill. The monolithic figures have been carved and erected with a clear and mature idea in the mind of the sculptor, and certainly by experienced hands. These islands are very small, and on Easter Island there is no forest, like the jungles of Yucatan, to cover ancient vestiges on the stony and barren grass-land with heavy humus. Sculptured stone does not readily deteriorate, and would remain for posterity whether it is made by skilled and experienced sculptors or represent a primitive and experimental period. Yet we find no traces of such an evolutionary period.

The time allotted for a necessary evolutionary period seems also to be conspicuously short in Polynesia, and shorter on Easter Island than on any other island in the whole Pacific, had the aboriginal immigrants actually come from the west. And yet the statues were not caught in the midst of their evolution when the island was reached by European discoverers, for the sacred terraces of these grandiose monuments no longer received attention. Cook (1777, Vol. I, p. 296) wrote of the statues at Easter Island that they "sufficiently shew the ingenuity and perseverance of the islanders in the age in which they were built; for the present inhabitants have most certainly had no hand in them, as they do not even repair the foundations of those which are going to decay."

It would be difficult enough to find in a tiny neolithic community like that which

[1] It is thought-compelling to note that to this comment by McMillin in the Nat. Geogr. Mag., the following footnote was added: "Of interest for comparative purposes, see *The Mystery of Easter Island*, by Mrs. Scoresby Routledge, in the National Geographical Magazine for December, 1921."

inhabits Easter Island sufficient manual labour to organise and execute the skilful transportation and erection of giant monoliths; it is certainly not possible for so small and so isolated a group of islanders to evolve in their midst what has otherwise been achieved only by some of the greatest powers of the Old and New World.

The styles, too, of the Easter Island and Raivaevae statues, for instance, are so markedly distinct that it is not possible to suggest that the one is a direct copy of the other. Obviously the stone-sculptors who settled on these islands and the other Polynesian groups nearest South America had not copied one another, nor had they developed their statuary independently of each other, but they had carried into the East Pacific certain basic concepts which each in turn put into use in his own new island home. The style may differ from island to island, but, as in South America, we can see a fundamental unity.

Before we consider divergencies and conformities in style and detail, let us first consider some of the basic problems confronted by these megalithic artists. A certain number of writers seem to consider megalithic sculpture a natural pastime for a primitive people who have nothing much to do but sit down and hack at a rock. They seem to overlook the fact that to a culture based on stone tools rock is the symbol of solidity and the least tempting substance for monument carving.

If an observer of native island life attempts to settle the local valleys in the original way, without the aids and means of modern man, as was attempted by the present author in the Marquesas Islands in 1937—38 (Heyerdahl 1941 a), he is likely to find boulders and rocks inviting as building material for walls and foundations; but it would certainly not be very natural to start shaping and dressing the stones to fit one another rather than to select angular rocks that rested naturally against each other while filling the gaps with smaller stones. And one may safely assert that nothing would seem less inviting and less natural than, with stone tools, to approach a mountain side with the intention of carving out a large block in the likeness of a man. If this urge did not bother an east-bound Polynesian migrant before he reached the islands closest to America, he was not likely to be beset with this inclination even there unless met with some local inspiration that had arrived from the other direction.

Before any writer feels justified in brushing aside the existence in Polynesia of anthropomorphous monoliths as a natural and readily conceivable development, he should at least take an axe and approach a giant boulder or a solid mountain-side with a view to showing how easily such a culture element may be achieved. If he finds that a successful result is not attained as easily as he thought, he should bear in mind that the Polynesians and the Peruvians did not even have iron, but created their megalithic monuments with the aid of stone tools which themselves had been shaped only by rubbing against or hammering with other stones. Such tools were left in the Easter Island quarries, and also throughout pre-Inca Peru. In the subsequent Inca period the Peruvians had acquired bronze, but the Incas did not in general sculpture stone statues. And although they maintained the former custom of quarrying stones for walls and fortresses, we learn even about the Incas from such an authority as Garcilasso (1609 b); "Their quarrymen used black pebbles, called *hihuanas*, for working the stones, rubbing instead of cutting them."[1]

[1] Technical studies of the prehistoric monoliths of San Augustín, Colombia, also show traces of the use of stone tools, and these tools, cut from andesite and similar hard rock, are found locally in large numbers. (Alba 1946, p. 854.)

Technical achievement of megalithic transportation in Easter Island

The quarrymen of Easter Island have never been seen in action by our own race, and the wood-carving natives found on the island by the first Europeans possessed no information about the origin of the colossal statues found there. This does not mean, however, that we have no information as to how the big statues were planned and carved. A sudden interruption of all work in the image quarry has left us with an interesting cross section of the daily operations, demonstrating furthermore the whole procedure of the manufacturing method.

The quarry is in the extinct crater of Rano-Raraku, near the eastern corner of the triangular island. Here are still to be seen the empty niches of the many statues which have been removed and in many cases transported over the rim of the crater to various destinations on the island. Beside the empty niches, 157 statues in different stages of completion are still left in the quarries. (Métraux 1940, p. 292.) Strewn about were formerly also the abandoned tools of the workmen: large, roughly chipped stones of the same nature as the hard nodules (lapilli) which occur in the volcanic tuff from which the statues themselves were carved. The stone chisels found *in situ* represent one rougher and one finer type, the former apparently used for roughing out the contours of the figures. The final polishing of the statues was done with abrasive volcanic stones. (*Ibid.*, pp. 278, 293.)

The sculptors began their work in the crater wall by chipping away enough material from above and around the future monoliths to give enough room to work freely. In certain cases the workmen's niches are visible in the alley-way around the statue, and their number indicates the very limited number of sculptors who were occupied with each statue at the same time. The statues were carved face upwards, and unfinished figures show that the front and sides were completed, even to every detail of the hands, before the undercutting began. The rock beneath was then chipped or rubbed away till the huge statue rested only on a narrow keel running along the spine. In the next stage to be seen the statue is completely detached from the rock round it and then chocked up by a number of smaller stones, quite ready to be launched and transported.

The work accomplished up to this point is the result of skilled labour directed by artistic talent, mathematical exactness, and long experience. Then begins the toil of the great numbers, organized and supervised by men well acquainted with the enormous engineering problems connected with the transportation and handling of cyclopean monoliths. Some of the statues to be transported were over 30 feet long and weighed as much as fifty tons or more, the approximate weight of 120 horses, all in one long, unwieldy and brittle stone-figure. Many of the monoliths were not removed very far, being erected on the slopes inside the crater, whereas others were transported up over the steep rim of the crater wall and thence over the rugged surface of the island to their final destination miles away from Rano-Raraku. As the front and the sides of the giant stone men had already been finally carved and polished to perfection, the greatest care and utmost skill were required in moving them to prevent injury.

Such inclinations and such working methods do not come naturally to an ordinary crew of eastbound Polynesian deep-sea mariners and fishermen. They result from ideas that come from a continent. Desire and imagination are not enough: routine and experience

inherited from a nation of some size are necessary for a small group of pioneers on a barren island to tackle such immense technical tasks as those mastered by the earliest inhabitants of Easter Island.

When a stone colossus arrived at its destination, which in the case of most of those which went to remote parts of the island consisted of an *ahu*, or ready-built stone platform, the chief engineering problem was to raise the enormous figure to a standing position. The smaller *ahus* held only one statue, but five statues was the average for *ahus* of medium size, and the larger ones supported up to thirteen and fifteen. (*Ibid.*, p. 293.) Most of the statues erected on top of the *ahus* were from twelve to fifteen feet tall, with larger figures up to thirty-three feet (10.27 m; Skottsberg 1920, p. 9). These *ahu* images are expanded at the base to rest upon the stones, whereas the images raised upon the slopes about the quarry, some of which are even larger, taper into a sort of peg for planting in the ground.

It is quite apparent that no combination of men grouped about a thirty-foot stone giant could be strong enough and tall enough to push the giant into the perpendicular. Nor was there any point near the *ahu* from which men with ropes could pull the statue's head upwards. Furthermore, as if the problem of raising the monument itself was not great enough, the architects complicated their own task by settling a huge cylinder-shaped piece of reddish rock upon the very top of the giant's head. How could a small community of native seamen solve the technical problems underlying this feat? A handful of men on the giant's head could not hoist a five-ton stone cylinder to their own level, nor mount it on the point upon which they stood; nor could a crowd below push this large stone up some five times their own height. Skottsberg (*Ibid.*) measured one of these head-stones from a fallen statue: it was roughly twenty-three feet in circumference, six feet high and over eight feet in diameter.[1]

It is an unfortunate fact that the "mystery" of the Easter Island statues has had more appeal to the common public than to the Pacific archaeologist. Not counting general text-books, encyclopedias, and travel descriptions, more papers have probably been devoted to Polynesian string-figures and marriage customs than to the prehistoric background of the anthropomorphic monuments on Easter Island. These vestiges, the most conspicuous and unchangeable in the Pacific island world, have played a decidedly secondary role in the efforts to reconstruct the Polynesian origins and migrations.

The absence of an authoritative answer to the Easter Island problem, generally replaced by an unconvincing theory of local evolution, has encouraged many general writers to propound the most unreasonable explanations. Recently the daily press devoted serious attention to a suggestion (Wolff 1948) that the extinct volcano underneath the quarries erupted at convenient intervals and was used by the sculptors to blow the brittle statues feet foremost to their destinations. And even to-day serious contributors to Polynesian literature include those who cling to the belief that Easter Island may be the topmost peak of a richly populated sunken land, the statues having been moved by the masses up towards the peak as the island was gradually being submerged. (Reche 1926.)

If the Easter Island achievement is impressive enough to encourage such theories in our own day in attempts to see how the statues were handled, how less likely is it that the methods would have come naturally to a few canoe-loads of local natives, or to any who

[1] See also Routledge 1919, p. 199.

were not already initiated into the art before arrival. Furthermore, we may certainly take it for granted that there was hardly a choice of methods available to these early stone age people, and we may therefore be justified in assuming that the unknown architects who abandoned the colossal Tiahuanaco megaliths and human statues were probably familiar with the same neolithic methods.

The entire cult site of Tiahuanaco is left as a jumble of carved stones, some of them being stupendous slabs of great size, far heavier than any of the monuments transported on Easter Island. The weight of the Easter Island statues is generally estimated, according to size, at from ten tons to upwards of a hundred tons. The most moderate figures are given by Métraux (1940, p. 304), who doubts whether the weight of any of the erected statues exceeds 30 tons. This estimate is a little too cautious perhaps, as it would almost mean that the most bulky of the statues would be able to float on water. The aforementioned statue measured by Skottsberg on an *ahu* far from the quarries and near the landing place at La Pérouse Bay must have a volume of about 30 cubic metres, and if weighing no more than 30 tons it would have the density of 1, like pure water.[1] But Métraux, quoting Delacroix and Wentworth, shows that the density of the Rano-Raraku tuff from which the statues are made is 2.48, which would give a statue of 30 cubic metres a weight of roughly 75 tons.

Technical achievement of megalithic transportation from Tiahuanaco and northwards

Now, in Tiahuanaco carved and erected slabs of forty or fifty tons are found everywhere. Bennett (1934, p. 440) excavated, besides the bearded image, another and larger stone human figure which was 25 feet tall, and the same author (1949, p. 186) says of the Puma Puncu group of megaliths, also at Tiahuanaco: "It is built of great slabs and stone blocks, some weighing over one hundred tons. ... The nearest source of the sandstone used in this construction is over five kilometers distant."

The Tiahuanaco megaliths quarried and transported for some distance include specimens which are thirty-six feet long and seven feet wide; twenty-five feet long, fourteen feet wide and nearly seven feet thick; etc. (Mozans 1911, p. 190; Posnansky 1914; Verrill 1929, p. 269; Steward 1946, p. 112.)

As Mozans (1911, p. 192) shows, as far back as the 16th century Cieza de Leon measured some of the titanic stone blocks of Tiahuanaco and was most impressed on finding that in the whole district there were no quarries whence the numerous great stones could have been brought. Mozans adds: "This same fact has equally impressed all subsequent investigators. So far as is known, there is no sandstone similar to that occurring in the ruins to be found nearer than fifteen miles, while the nearest place at which trachyte and basalt can be procured is Copacabana, which, in a straight line across the lake, is forty miles distant.

[1] Skottsberg (1920, p. 9) gives the dimensions of this statue as follows (it had been willfully undermined and made to fall from its *ahu* by island tribes without any respect for those who formerly created these monuments): Total length 10.27 m; length of body 6.55 m; length of head 2.52 m; length of neck 1.2 m; width of body at base 2.7 m; thickness of body at base 1.6 m; width across shoulders 3.2 m; width across head 2.6 m; width across neck 1.9 m; circumference round shoulders 7.9 m; circumference round neck 5.2 m; length of ear 2.4 m.

How were the immense monoliths used in these structures transported for such distances?"

Spence (1913, p. 250) wrote: "Other remains of these prehistoric people are found in various parts of Peru. At Sacsahuaman, perched on a hill above the city of Cuzco, is an immense fortified work six hundred yards long, built in three lines of wall consisting of enormous stones, some of which are twenty-seven feet in length."

At Ollantay-Tambo, forty-five miles north of Cuzco, is another giant fortress "constructed for the most part of red porphyry, and its walls average twenty-five feet in height.—The stone of which this fortress was built was quarried at a distance of seven miles, in a spot upwards of three thousand feet above the valley, and was dragged up the steep declivity of Ollantay by sheer human strength."

With regard to these two latter megalithic constructions it is interesting to note that, according to Means (1931, p. 137), the northern wall of Sacsahuaman (the fortress of Cuzco), and some walls of Ollantay-tambo also, seem to be pre-Inca and of Tiahuanaco type. Bingham (1948, p. 4) has estimated the weight of the stones in this particular Sacsahuaman wall, and, for the smaller blocks, reckons ten to twenty tons, and for the larger ones two hundred tons; a few of the largest, three hundred tons. Yet these colossal blocks, which far exceed anything handled on Easter Island, have been dragged to the site, superimposed and fitted together perfectly without the use of cement.

Since Means has suggested that this impressive northern wall of the Cuzco fortress is pre-Inca and of Tiahuanaco type, we may well recall what Andagoya (1541-46, p. 55) says the Inca owners of the fortress told the arriving Spaniards. They claimed that "the edifices of Cuzco and the fortress, which is made in a wonderful manner" were originally built by an immigrant Viracocha lord who was "a white and bearded man, like a Spaniard." (See Part V.) Also the anonymous Chronicler cited by Bandelier (*Ibid.*) narrated that it was a certain Viracocha, a man who was shrewd and wise and said he was a child of the sun, and who had come forth from Titicaca and made himself chief over the long-ears, who raised the Cuzco stone constructions, including the local fortress.

We recall with Rowe that the pre-Inca level of Cuzco shows archaeological affinities to the Titicaca basin with Tiahuanaco in the south, and to Chavín in the north. Hutchinson (1875, p. 453) wrote from Chavín even before the site was excavated: "The first of its remarkable antiquities is a bridge over the river Chavín. This is made of three large stones of granite brought from a great distance, as all the geological formation of the neighbourhood is of sandstone... One is confounded at trying to guess by what mechanical appliances a granite stone, nearly twenty feet long and a foot and a half wide,[1] could be transported over these mountain heights."

To carry the comparison of these megalithic achievements back to the jungles of early Southern Mexico, we may again quote Stirling concerning his "Olmec" finds. He describes a number of monoliths representing human heads resting on stone platforms, and measured one of these giant heads at 14 feet high, 7 feet wide, and weighing about 50 tons. He wrote (1940, p. 333): "Most of these stones are large and heavy. We were assured by petroleum geologists in the region that no igneous rock of the type from which these monuments were carved exists at any point closer to the site than 50 miles. How

[1] The longest of the three measured 6.50 m, or 21 feet 3 inches. (*Ibid.*)

were these immense blocks of stone moved this long distance down rivers and across great stretches of swamp to the location where they now rest? Certain it is that the people who accomplished this feat were engineers as well as artists."

There is no local legend to tell us who erected these gigantic stone heads, but it was in the area of these same monoliths that Stirling (*Ibid.*, p. 327) uncovered a stele on the back of which he found the relief of a face belonging to a "remarkable handsome individual with an aristocratic aquiline nose and a curious long, flowing beard." The appearance of the latter figure was such that it was nicknamed "Uncle Sam" by the expedition. (*Ibid.* See Plate XXII **3**.)

If the first Easter Islanders came from the east, as the first local king was actually said to have done by the mixed aboriginals of the island (see Part IV), then they came from the direction where all these prehistoric peoples of Southern Mexico and the Andes had lived—experts in carving and transporting stone heads, anthropomorphic stone statues, and other colossal monoliths. It would not then be surprising if the maritime discoverers of Easter Island climbed the Rano-Raraku quarry near the east coast and began boldly and confidently to carve anthropoliths out of the solid rock with the intention of moving them about the island to planned destinations.

The probable procedure of megalithic work on Easter Island

We have seen how the Polynesian tribes shared the peculiarity of their great American neighbours in being wholly ignorant of wheeled transportation, although both had paved ways and roads. None of them were familiar with hard metals or machinery. It is obvious then that their transportation achievements were the result merely of the successful application of some ingenious system assisted by ample time and combined muscular power.

It has frequently been maintained that barren Easter Island could never have supported the population required to carry out the work which was done in the prehistoric era of the island. This argument has been based partly on the fact that the local monoliths were not carved and transported singly, for several were under simultaneous construction when the work was abruptly abandoned. As we have seen, in spite of the comparatively moderate number of statues which have been raised on *ahus* in various parts of the island, more than one hundred and fifty monuments in different stages of development were still left in the Rano-Raraku quarries.

Routledge (1919, p. 181) points to this fact in her excellent survey of the island monoliths: "It remains to account for the vast number of images to be found in the quarry. A certain number have, no doubt, been abandoned prior to general cessation of the work; in some cases a flaw has been found in the rock and the original plan has to be given up—in this case, part of the stone is sometimes used for either a smaller image or one cut at a different angle. In other instances the sculptors have been unlucky enough to come across at important points one or more of the hard nodules with which their tools could not deal, and as the work could not go down to posterity with a large wart on its nose or excrescence on its chin, it has had to be stopped. But when all these instances have been substracted, the amount of figures remaining in the quarries is still startlingly large when compared with the number which have been taken out of it..."

Again, as later stressed by Métraux (1940), we must not overlook the fact that quite a large number of the Rano-Raraku statues were actually erected on the inner slopes of the crater, and that there was no intention of moving them away. This reduces even more drastically the number of statues that had been abandoned during the actual work. Since the workmen's niches clearly demonstrate that only a few sculptors could work simultaneously on one monolith, we shall find that the number of sculptors busy in the quarry at the same time was not extremely large. When we next look for the statues abandoned during the actual process of transportation, their number only amounts to two or three. (Routledge 1919.) These indeed, were at the time of their abandonment the only statues which occupied at all a large body of man-power.

Certainly the labour available in Easter Island was very limited when compared with that of the autocratic powers which organized mass labour for megalith transportation in Peru and comparable continental empires. The most optimistic calculation of the population capacity of Easter Island was Edmund's, quoted by Routledge (1919, p. 215), according to which about half the total area of the island, or some 15 000 acres, could formerly have grown sweet potatoes and bananas. Two acres of cultivated ground would be sufficient to supply a local family, with extra food supplies from the sea. There are still traces of prehistoric terrace cultivation on the very hill-tops, and the sweet potato was a very important crop when the island was discovered by Europeans. (See Part VII.) If this estimate holds good, then the Easter Island population must have greatly decreased by the time the Europeans arrived, as Roggeween and the other early travellers did not find any such impressive community. Skottsberg (1921, p. 101) refers to another calculation which shows that Easter Island in a period of high culture could support at least 5 000 individuals. Métraux (1940, p. 14) is still more careful, but feels convinced that three or four thousand natives could have lived on the island without fear of hunger except in time of war. The megalithic work on Easter Island will have to be judged in connection with a local population whose margin is roughly marked out by the above calculations.

There is not much choice as to the manner by which the statues can have been moved. There was not enough space round one unwieldy statue for a number of men to be able to lift it, so the statues must have been dragged along the ground. Since wheeled transportation was unknown, they must either have been pulled over rollers, or else moved along on some sort of lengthwise skids to prevent the heavy monolith from digging itself into the stony ground. The fact that the statues were completed and polished down to the least detail except for the keel on the back *before leaving the quarry* is a clue of some value. A statute could not then be permitted to tip over on its side while passing over the rugged island surface, or the polished parts of the fragile tuff would have been scarred and damaged. It therefore follows as a consequence that during transportation the statue *must* have rested firmly on its back, with its dorsal 'keel' in some sort of a frame to prevent capsizing. This would indicate the use of a sledge-like affair, and we have therefore also a reasonable explanation to the practical problem of how the stone colossi could be dragged over the ground with the *friction* greatly reduced.

It has often been suggested that timber for rollers and transportation would not have been available on the almost treeless Easter Island. Again Skottsberg (1920), as a botanist, came to believe that a forest of *Sophora* and perhaps other now extinct species once grew

on Easter Island. Indeed, a great demand for timber and firewood would soon make an end of a forest on so small an island. We have in our own historic time seen how the island of Motane, once covered with dense forest, has been turned into a treeless and deserted stonewaste by the hordes of European sheep and other formerly domesticated animals that have shown no mercy to the island vegetation. (Heyerdahl 1938.) In his approach to the problem of image transportation, Skottsberg (1920, p. 10) pointed out that Thomson (1889, p. 486) discovered near a group of *ahus* a fine landing-place made by art and "admirably adapted to the landing of heavy weights". Admitting that no fragile canoe could float with one of the large images as cargo, he says: "One might suggest that large rafts were built but, on the other hand, there are several ahu which are inaccessible from the shore." Skottsberg came back to what seems to be the only tenable answer to the problem: "Some sort of a sledge-like apparatus could have been constructed without the need of timber of any considerable size. A sledge would slide quite well over the grass, provided that the road was cleared from stones. A great number of people could be simultaneously engaged in pulling, while, if rollers were used, the image must have been more difficult to handle."

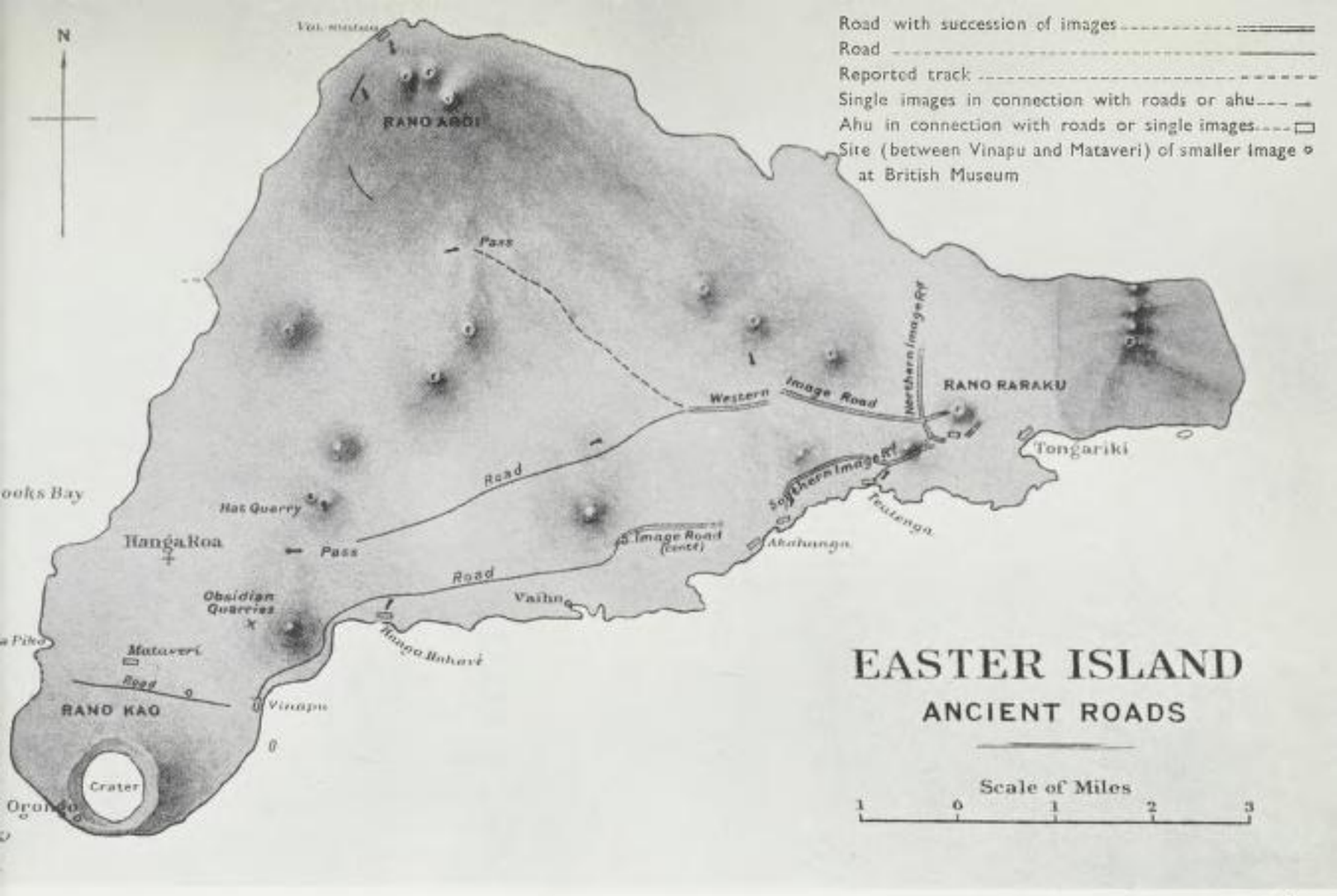
We shall later see that cleared roadsections, which in some cases may have faciliated the transportation of the images, are found over large stretches of Easter Island. It is not incredible that rollers of logs or round pebbles were used underneath the sledge-like frame, and that seaweed and grass (Thomson 1889) or even taro and sweet potatoes were used for lubrication (Métraux 1937 b, p. 134). The Polynesians, even in historic times, have been renowned for their skill in manufacturing all sizes of excellent rope from inner bark and other vegetable fibres, and when the Spaniards came to Peru they found in that country suspension bridges made from cables woven to the thickness of a man's body and with a length exceeding two hundred feet. (Prescott 1847, Vol. I, p. 86, based upon the report of several chroniclers.)

With ropes and a supporting frame, a fifty-ton image could be pulled along a cleared path by some four or five hundred men, more or less according to the gradients and surface conditions. The smaller statues could, of course, be transported with a correspondingly smaller number of labourers. Métraux (1940, p. 305) has shown that other Polynesians have moved weights as heavy or heavier than the average Easter Island statues: "Two 60-ton vessels, blown inland by a hurricane, were carried back to the sea by Maoris. It is said that one was transported by 2 000 men; the other by only 200." He further emphasises that: "The major difficulty in transporting Easter Island images was not the great weight but rather the fragility of the soft tuff. The moving of statues without scarring them is, in my opinion, the greatest achievement of the Easter Islanders."

We have however yet to account for the final achievement of the Easter Island architects: the raising of the statues on to their feet, whether on sunken pedestals or resting on the *ahu* platforms.

The present Easter Islanders have no clear recollection of how this was done. It seems, however, that a tradition surviving among their Polynesian relatives on Tonga may furnish the simple answer. We may quote Métraux (1937 b, p. 134):

"The erection of the famous trilithon of Tonga, like that of the Easter Island statues, has long been a puzzle, and many wild theories have been proposed to explain its origin.



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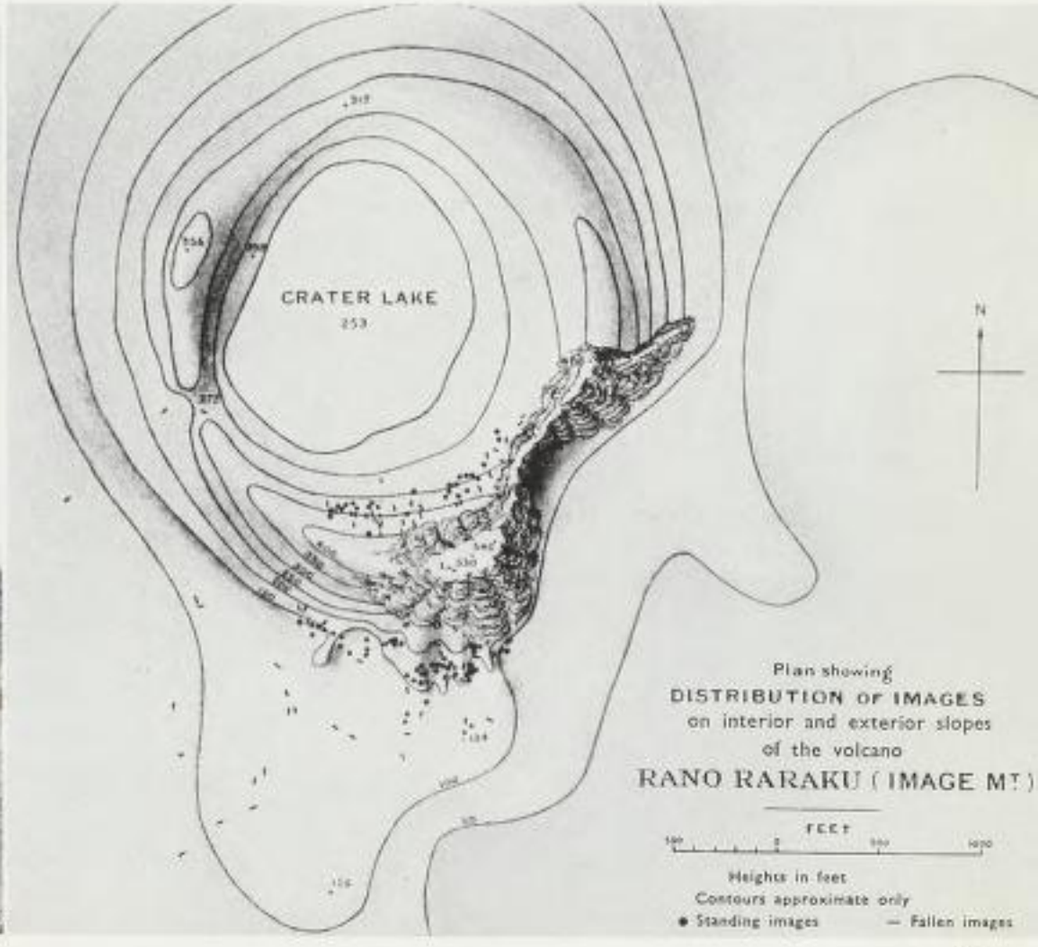

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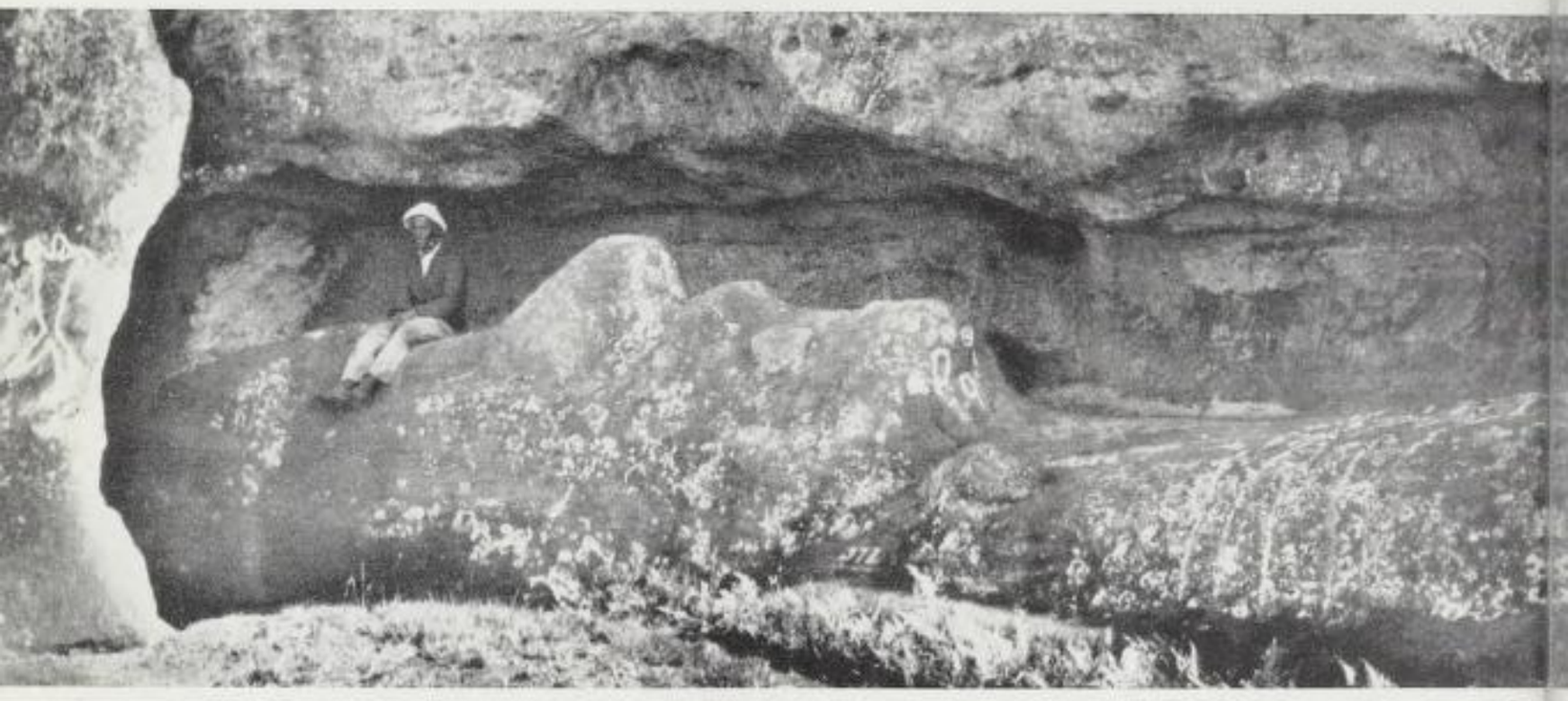
Distribution of roads and image sites on Easter Island. **2** A section of the south-eastern aspect of Rano Raraku's exterior with statues and quarries as shown in Routledge's diagrammatic sketch. (From *Routledge 1919.*)

1



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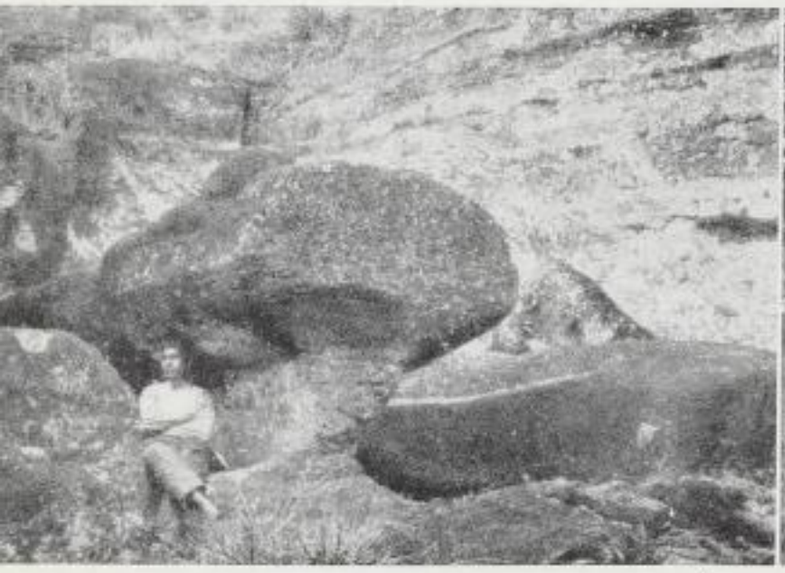

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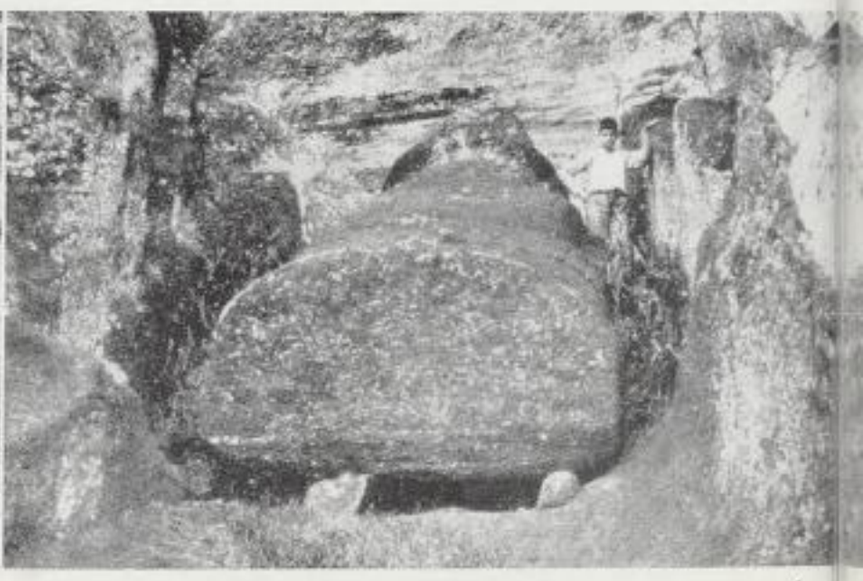

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Plate XXXVIII

1 Fallen statues on the slopes of Easter Island. **2** Upper section of 66 feet long stone statue lying unfinished in its niche in the quarry. (Photos: *H. Martini.*) **3** Nearly finished statue still attached to the floor of quarry by a narrow dorsal keel, and **4,** another one, all ready for launching, wedged up by stones. (From *Routledge 1919.*)

Plate XXXIX

Stone statues on Easter Island. (Photos: *H. Martini.*) Monuments of this sort are only found on the Pacific islands nearest South America, and the history of the present Polynesians has preserved no tenable explanation for their purpose or of the way in which they were transported and erected.

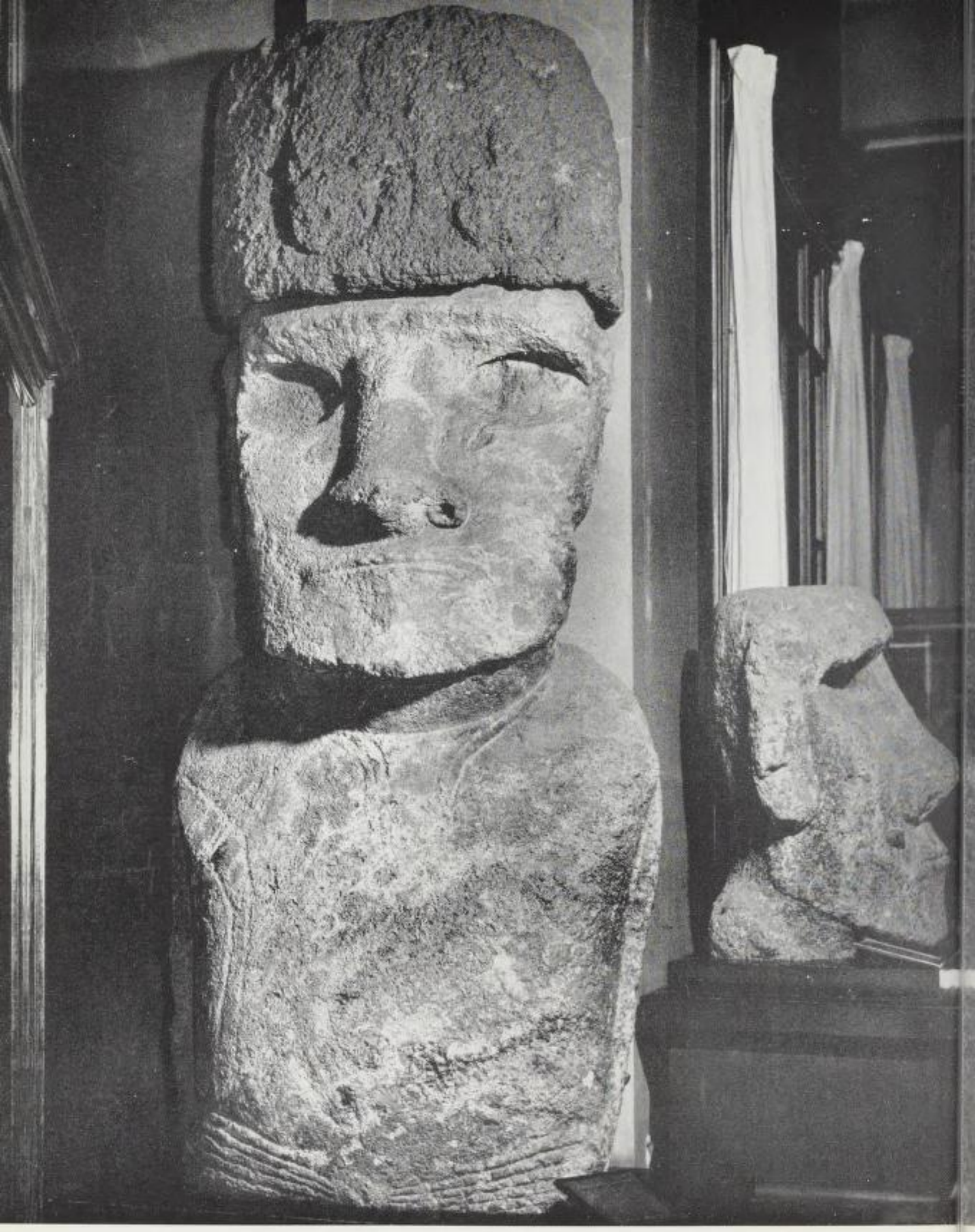

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Plate XL

Easter Island stone bust and head. (Courtesy: *The Smithsonian Institution.*) Compare this island specimen with the one from the pre-Inca cult centre at Tiahuanaco illustrated in fig. **1** on this page.

Plate XLI

1 and **2,** stone statues from Tiahuanaco. At this pre-Inca cult-centre the Peruvians considered Tici to have created man before he and his white and bearded followers descended to the Pacific coast of North Peru and left into the ocean. (Photo: *Toucan Press-Wegeseb.*) **3** Reddish sandstone figure from Incatunuhuiri, Peru. (Photo: *Peabody Mus. Harvard Univ.*)

1

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2

Plate XLII

1 Monolithic statue from the prehistoric cult-centre of San Augustín in the northern Andes, and **3** back view of same. (From *Preuss 1931.*) **2** and **4** Front and back view of monolithic statue from the prehistoric cult-site on the east coast of Hivaoa Island, Marquesas, directly facing the Andean coast at some weeks' distance by raft. (Photo: *T. Heyerdahl.*)

3

4

Plate XLIII

Stone human statues **1** from Pukara, Peru (photo: *L. E. Valcárcel*); **2** from the Marquesas Group, Polynesia (photo: *Musée d'Ethnographie, Paris*); **3, 4** from the Tubuai Group, Polynesia. (Photos: *B. P. Bishop Mus. Honolulu.*)

1

2

3

4

Peculiar type of stone statue **1** from San Augustin in South America (photo: *John Costa, Black Star*), and **2, 3, 4** from Raivaevae in southeast Polynesia (photos: *B. P. Bishop Mus.*).

Stone human statues from South America and East Polynesia. **1, 4, 5** from the Marquesas Islands. (Photos: *T. Heyerdahl.*) **2** Tiahuanaco. (From *Posnansky 1914.*) **3, 6** San Augustin. (From *Preuss 1931.*) Tiahuanaco statue **2** is earlier (plate XLI **2**) compared with an Easter Island statue, and bridges the gap in style between the distinct Polynesian forms found respectively on Easter Island and in the Marquesas Group.

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6

Monolithic statue from Raivaevae, the Tubuai Islands, Southeast Polynesia. (Photo: *B. P. Bishop Mus.*) Note relative proportions of head, body, and legs, as well as position of hands, and compare South American figure on opposite page.

Monolithic statue from San Augustin, Colombia. (Photo: *John Costa, Black Star.*) A vast number of large and small stone human figures are left by an unidentified prehistoric culture people at this deserted South American cult-site.

1

2

3

4

South American and East Polynesian stone statues. **1** San Augustin, Colombia. (From *Barradas 1943.*) **2** Nukuhiva Island, Marquesas. (From *Freeman 1921.*) **3** San Augustin. (From *Barradas 1943.*) **4** Easter Island. (From *Routledge 1919.*)

Mac Kern obtained from an old Tongan a detailed and logical account of the method used. As it is probably similar to that resorted to by the Easter Islanders for erecting their statues, it is worth mentioning here.

"The pillars which weighed between 30 and 40 tons were quarried near the shore. 'When they were shaped they were dragged over wooden skids, by means of heavy ropes and the combined muscular power of many men.' Close to the pits where the columns were to stand, an earth incline was built with a retaining wall of trees and brush. The stones were dragged to the edge of this mound and were then nicely balanced and carefully guided by ropes to fall endwise into the pits. The same method was employed for the lintel. The earthern incline was removed, leaving the trilithon in position. Other than the wooden skids and the ropes, the only implements used by the Tongans were blocking wedges and levers."

This is most interesting, for this procedure is identical with that used in early Peru, concerning which Rowe says (1946, p. 226): "Stones too big to be carried were moved on rollers with the aid of wooden pry bars and large crews of men pulling with ropes. The blocks were raised into position by building a ramp of earth and stones up to the height of the wall and running the blocks up on their rollers. Cobo saw this technique used by Indian workmen employed on the construction of the Cuzco cathedral, and a half-finished chullpa at Sillustani in Puno has such a ramp still in place."

Montesinos (1642, p. 19) also, when describing the legendary procedure of the megalith work on walls at Cuzco in pre-Inca days, says that the quarrying was done "with picks and axes made of stones from rivers and filed as if they were made of steel. . . . They had no derricks with which to lift the stones into place, so they used this device: They banked the earth at a moderate angle up to the top of the newly completed first tier of stones; then, with human force, they carried up a second tier, rolling the stone over and over, however large it might be, and they adjusted it to the wall very slowly and accurately."

The possibility that the ancient Easter Islanders made use of this same simple but most ingenious method is strengthened by the fact that it was also employed by the megalithic workers in the early Marquesas. Both Linton (1925) and the present author were informed by the aborigines of central and south Marquesas that according to tradition a temporary ramp of pebbles had been raised against the face of the megalithic masonry to allow the giant blocks of the upper levels to be hauled into position. A quite analogous working method would allow the Easter Islanders to pull their stone giant feet foremost up a temporarily constructed ramp, and then tip the colossus over the steep side into a foundation-hole dug in the ground below, or else down upon the pavement of the *ahu*. The presence of such a temporary embankment might even have encouraged the Easter Islanders to accomplish their final feat, namely to drag up an extra stone and place it carefully on top of the statue before the ramp against its back was removed.

The significance of the red pukao on the head of Easter Island statues

To-day all the statues which formerly stood on the pavement of the *ahus* have fallen, but at the time of the early voyagers some at least were still standing. Cook (1777, Vol. I, p. 281) wrote from Easter Island: "Each statue [on the *ahu*] had on its head a large cylindric stone of a red colour, wrought perfectly round."

To-day these red blocks lie on the ground beside the fallen grey giants whose heads they formerly ornamented. We can safely say that hardly anything but an embankment of the sort already described could have brought one of these summit-stones to its place on the head of a statue. One of these stone cylinders—which are popularly called image "hats" —was measured by Skottsberg (1920, p. 9) as 2.5 m (8′2″) in diameter and 1.85 m (6′1″) in height, with a volume of 9 cubic metres, and a weight, therefore, of more than twenty tons. This "hat" was lying beside a fallen figure, and the author describes the remains also of a sort of stone wall on the *ahu* close beside the statue. He asks: "Could it not be possible that the stone wall spoken of above was part of a construction on which the hat was to be rolled up to the top of the image?"

There may also be a fragment of memory in a tradition collected by Routledge (1919, p. 197) in respect of a lofty image which formerly stood on one of the *ahus*. Pointing out a hillock near this particular platform, her native informant said that once "a causeway was made from it to the head of the tall figure which stood upon the ahu, and along this the hat was rolled."

A temporary stone ramp or embankment high enough to tip the statue into position was fully within the capacity of a people which had time and labour sufficient to work on more than one statue at a time. And while the embankment was still in place against the back of the statue, it must have been a temptation to use it, before removal, for the hauling of an extra stone to the top of the first. But this does not explain why the sculptors went to another side of the island to secure a special reddish rock for the upper cylinder. There was a special quarry for these reddish top-stones at Punapau, about seven miles from the image quarry at Rano-Raraku. The cylindrical "hats" measured from six to nine feet in diameter and from four to eight feet in height; they had an oval depression below and were cut with a distinct knob on the top. Only statues raised on the sacred *ahus* were distinguished in this manner, and Métraux (1940, p. 301) thinks it was a secondary idea not practised right from the beginning.

A few half-buried "hats" remain in the "hat quarry" at Punapau, and a great number of others are strewn along the path leading down from this quarry to the foot of the mountain. As distinct from the images, these top-stones were transported—probably rolled—as mere cylinders to the sites of the giants on whose head they were to rest. Not until they arrived were they given their proper shape with the characteristic round boss or knob at the upper end. (See Plate IL.)

The problem behind the emphatic choice of a reddish stone for the giant "hats" on the otherwise nude statues may take an interesting form when we recall the venerated reddish hair of the *uru-kehu* individuals which existed sporadically on Easter Island and throughout most of Polynesia. (See Part IV.) Balfour (1917, p. 369) was the first to suspect that the red top-stones on the Easter Island figures were not meant as "hats". In his noteworthy paper "Some Ethnological Suggestions in Regard to Easter Island" he says:

"Lastly, in connection with these statues, I have a suggestion to make in regard to the so-called 'hats', or 'crowns'. These, as I have already mentioned, are huge cylinders of red volcanic ash or tufa, which were placed on the tops of the heads of some of the effigies. Now, if these merely represented hats or other head-gear, it is difficult to see why the natives did not carve them out of the rock in one piece with the statues. That would have

been an easy and obvious method of arriving at an adequate result where only a hat was intended. Why, then, did they take the trouble to go nearly across the island to another crater in the Teraai Hills in order to employ as material for the 'hats' a special kind of very *rough* rock, a vesicular *red* tufa?

"I wish to urge as a tentative and heterodox suggestion, that the reason was that these red cylinders were not intended to represent hats at all, but hair. . . . a *red* tufa was selected in order to conform with the practice, common enough in Melanesia, of bleaching the hair to a reddish colour with lime, or of coating it with red ochre."

Later Métraux (1940, p. 301) took up the same problem. He quotes Jaussen, who at an early date learned that the Easter Island term for the red image 'hats' was *pukao*, and adds: "The original meaning of *pukao* is topknot. The cylinder with a knob may have been an attempt to represent the long hair tied up on the head in a big knot (*pukao*), a fashion very common on Easter Island. . . . More interesting is Skinner's comparison of the Easter Island image hats with the cylindrical representation of the topknot on the heads of ancient figures in Maori carving. . . . The theory that these crowns were merely a crude attempt to ornament the statues with a structure similar to a topknot (*pukao*) is the most logical assumption."[1]

We have seen how the black-haired Polynesians in many of the islands imitated the natural hair colour of the *uru-kehu* by plastering or painting their own hair red. Stephen-Chauvet (1934, p. 18) gives the following description under the heading "male coiffure" on Easter Island: "Formerly the Easter Islanders always walked about bare-headed; their hair, regularly cut above the ears (A. Pinart), was artificially rouged and united in a top-knot on the summit of the head, by the aid of plant fibres and a coating of mud."

The Caucasoid elements and the Easter Island statues

We now come to a vital point. These islanders plastered their hair red to imitate some ideal of beauty. This ideal of beauty was not merely a product of the imagination, since it was locally inherited through strains of naturally red-haired *uru-kehu*. Is it not probable, then, that the Easter Island statues directly depict this early red-haired ideal? May they not represent ancestor-portraits of chiefs and heroes of this venerated appearance?

G. Forster (1777, p. 575) wrote in reference to the Easter Island statues, during his visit with Captain Cook: "We put some questions to the most intelligent persons among them, concerning the nature of these stones, and from what we could understand, we concluded that they were monuments erected to the memory of some of their areekees [*arikis*], or kings." J. R. Forster (1778, p. 567) was also told that the statues represented former chiefs, or 'hareekees'. Cook (1777, Vol. I, p. 296) himself noted that the Easter Islanders had preserved the individual name of some of the statues, and that the word *ariki* (chief) was added after each name. We may thus safely assume that the Easter Island

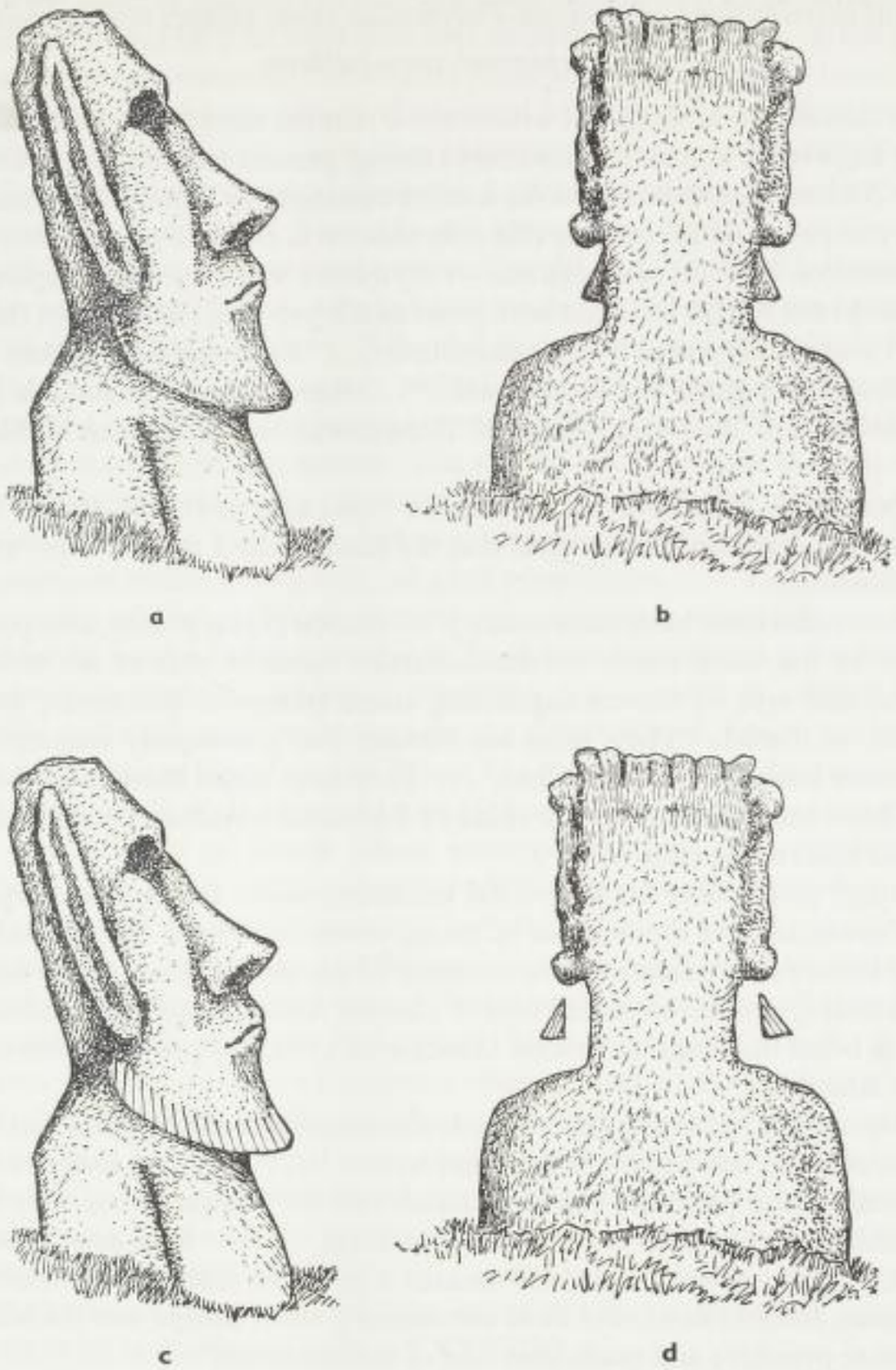
[1] Routledge (1919) has shown the direct connection between the statues and the so-called 'bird-man' cult on Easter Island. Now, another name for the *pukao* or 'topknot' of the Easter Island statues was *hau*. The ceremonial 'bird-man' for the year, upon whom the divine choice fell, was also called *hau*, yet he wore no 'hat' but had instead "a fillet of human hair bound round his shaven, red-painted head." (St. Johnston 1921, p. 140.)

statues represent no elementary powers or supernatural beings, but were raised as ancestral figures exactly like the monuments of Tiahuanaco and Pukara.

The Easter Island statues, carved in the image of the *arikis* or chiefs of the early local culture-people, have a great deal to tell us, when we recall (Part IV) that the first Easter Island *ariki* was Hotu Matua, who came from a sun-dried land, in the same direction as Peru, with long-ears among his followers. The statues not only depict such long-ears—the most noteworthy distinguishing mark of the royal families in aboriginal Peru—but they also embody a monolithic art-form most important in aboriginal Peru, and assigned by the Inca to Tici Viracocha and his adherents, the same hierarch who instituted the ear-lengthening custom in the pre-Inca period. Furthermore, in Peru these departed heroes were remembered as having a physical appearance resembling Europeans; they were *Viracochas*, just as J. M. Brown (1924, p. 236) writes from his visit to the island: "There is a general consensus of the European-like features and colour of many of the natives of Easter Island. And the faces of the images confirm this Caucasoid impression; they are oval, straight-nosed, large-eyed, thin-lipped and short in the upper lip, the features that distinguish or are supposed to distinguish the highest ideal of beauty of the north-west of Europe."

Many observers have commented on the enormous chins of the Easter Island statues, drawn out in length and width to terminate in a broad and sharp edge. When we look carefully at Thomson's drawing (1889, p. 493) of a back view of the general type of statues at Rano-Raraku (see fig. b p. 373), we cannot help noticing that no ordinary "chin" so projects on both sides that it is visible from behind. We may, therefore, look again at the profile view (fig. a), and find that whereas on an ordinary face the distance from mouth to chin is normally twice the distance from mouth to nose, on the Easter Island statues it is three times that distance. If we shade or remove the part of the chin which is thus added to what would be a natural form, then we get the pictures shown below in c and d. It seems fairly evident that the sculptors of these stone faces intended the extended lower face to represent a bearded chin. This view is strongly supported by the other ancestral figures on the island. The smaller statues (*Moai kavakava*), carved in wood, invariably have readily distinguishable goatees on their chins, together with extended earlobes. (Plate XXVIII **3, 4**.) This fact has been pointed out by Métraux (1940, p. 251); and Routledge (1919, p. 269) found that three or four of the stone statues inside Rano-Raraku show the same form of goatee beard as carved on these wooden images. She also speaks of three stone heads carved in relief on the wall of a local subterranean chamber: "The one which was best wrought was twenty inches from the surface of the wall; it had a pronounced 'imperial'." (*Ibid.*, p. 275.)

We recall that the Tiahuanaco statue which had the lightning rays running around the forehead and into the eye-brows and beard, was carved, like its Mocachi counterpart and many other Andean monuments, from a selected reddish sand-stone. We suggested that the symbolic interpretation was that the growth of hair on the bearded person depicted was light or flame-coloured. There was no other way for the sculptor to indicate this peculiarity since the whole statue is sculptured in red rock. If the Easter Islanders shared progenitors with this particular Tiahuanaco stock, which seems borne out to some extent by the fact that the present natives in both localities begin their genealogies with the kings



Tiki and Tici, then these fundamentally related sculptors have only chosen two distinct means of representing the same reddish or flame-coloured hair. It should not be so surprising then, that just such hair is found on the ancient mummies of the early "burial grounds" on the South American coast between Tiahuanaco and Easter Island.

Typological distributions of Andean-Polynesian stone statues overlap without regard to present race-pattern

We have seen earlier how several writers show that the remarkable Easter Island custom of erecting large stone human effigies bears a strong general resemblance to a characteristic trait of the Andean high cultures on the nearest continent up wind. Many casual observers have been compelled to notice that this resemblance is not one of idea only, but also of general execution. Enock (1912, pp. 262—278) quotes Wallace, who compared the Easter Island statue in the British Museum with some of the pre-Inca statues from the Andes, and then said "I was greatly struck by the resemblance. . ." Referring furthermore to one of the principal Marquesan stone statues, he held: ". . . there is an air about this image which seems reminiscent of the stone figures of Tiahuanaco, on the Andean highlands of Titicaca."

The experienced Pacific traveller Christian (1924 a, p. 525) was struck by the same resemblance and expressed the opinion that the Easter Island monuments "exactly recall" those of Tiahuanaco.[1]

Another traveller from both these areas, J. M. Brown (1924, p. 268), also pointed out the resemblance of the work inside the Rano-Raraku crater to that of the stone-carvers of Tiahuanaco, and says of the corresponding stone statues at Raivaevae, in the Tubuai group south of Tahiti: "Their faces are human, but grotesquely human, quite unlike the great stone images of Easter Island, . . . They have more likeness to the great stone busts that have been taken from the ruins of Tiahuanaco and set up on each side of the gateway that leads to the church."

Ojeda (1947, p. 11) after his long local residence, wrote in his monograph on Easter Island: "The statues and monuments of stone, which have been claimed to be mortuary sanctuaries intended to perpetuate the memory of the sacred chiefs of the island, present an obvious analogy to the stone cultures of Central America and Tiahuanaco. This is the basis for our belief that their makers are branches of a stock of people common to America and Easter Island."

St. Johnston (1921, p. 81) was so emphatic about the same resemblance that he published illustrations of three comparable statues and wrote: ". . . the stone images and platforms in the Austral Group [Tubuai], Pitcairn Island, and the Marquesas are very like those of Easter Island, and still more so like those of Peru. . . . the long ears, protruding lips, short arms, position of the hands, and stunted legs in the three illustrations I give from the Marquesas, Easter Island, and Peru are absurdly alike, except that the island ones are naturally more primitive and crude than that of the mainland."

When we compare the Andean and East Polynesian monoliths reproduced on various pages of the present work, we cannot deny the assertion that there are as many resemblances between certain Andean and Polynesian anthropoliths as there are between individual statues inside Polynesia or inside Peru, and often more. We are getting back to the same observation we made when dealing with the various sites of the early Andes: each geographical locality has often developed its own distinctive style, which will generally be

[1] Knoche (1914, p. 2) had a decade earlier, in a rather sweeping statement, denied the slightest resemblance between the stone statues of Tiahuanaco and Easter Island. (See for comparison Plates XL and XLI **1** of present work.)

special to its own place or period. Yet the same basic conceptions and mutual inspirations are ever-present, adapted only to local taste and secondary convention. In this respect the Polynesian stone statues can only be divided from those to be found from Mexico to north-western South America by reason of the ocean between, whereas the American specimens are united by land. This is a deceptive observation, for an ocean drift from Peru to Polynesia is faster than any migration down the Andes (300 miles a week according to the Kon-Tiki expedition), and apart from this the Easter Island statues are slightly nearer to the coast of Peru than to their next nearest "neighbours" in the Marquesas. We can distinguish between most of these stone statues to-day only because we are accustomed to find them in their specific localities. If the Polynesian statues had originally been found in some extinct South American centre instead of some weeks travel out at sea, they would have created no wonder but have been accepted as just another local manifestation of the early American megalithic culture. The statues vary so much in form and type—whether after different models, by different artists, or in different periods—within the Titicaca area, or within San Augustín, that an attempt by the islanders to copy the Andean statues from memory would leave a wide range of possibilities.

No exact replica of Easter Island statues exist elsewhere—certainly not among the statues raised on the nearby Polynesian islands. In style and expression it is a local creation, but in idea, working method, and basic conception it is a result of cultural inheritance from an outside and continental evolution area. As already stated, there is no evolutionary thread behind the Easter Island giants. There has been, from the first attempt, a clear conception in the artist's mind of what he wanted to do and how he was to go about it. Among the vast number of Easter Island anthropoliths only one single specimen is recorded (Routledge 1919, p. 184) the head of which seems to have melted into the body, while the large ear and the arm have been fused. But even in this unsuccessful specimen the usual conceptions were present, and the hands were placed in the conventional position on the stomach. From this advanced stage a *further* evolution might well have taken place had the megalithic work not been interrupted. Métraux suggests that the idea of ornamenting statues with red *pukao*, or top-knots, might possibly have been an afterthought, and certain is it that the spectacular grandeur of the statues might have increased enormously had the work been permitted to go on. One of the unfinished statues in the quarry measures about fifty-two feet, and another one, the largest of them all, measures sixty-six feet. (Routledge 1919, p. 182.) If the final undercutting and erection of this statue had taken place, it would have reached the height of a seven-storey building all in one piece of stone, for which reason some archaeologists doubt whether it was really intended for removal from its niche in the quarry.[1] (Plate XXXVIII **2**.)

If these almost completed stone giants had been loosened from their bed-rock in the quarry, the chain of megalithic art would have reached, among the long-ears of lonely Easter Island, a final stage that would have surpassed in its cyclopean dimensions anything achieved during the commencing evolutionary stages abroad. The greater number of the really finished Easter Island statues, however, averaged only some twelve to fifteen feet, and so were smaller than the largest stone men of Tiahuanaco.

[1] Routledge (*Ibid.*) says: "tradition, it is true, points out the ahu on the south coast for which this monster was designed, but it is difficult to believe it was ever intended to move such a mass."

The settlers of Pitcairn, Raivaevae and Tubuai to the west, and of the Marquesas Group to the north-west, seem to have raised a few statues of the average South American size and then quickly dropped the custom without any attempt at further evolution. Churchill (1912) quotes Mager, who held that some Raivaevae statues resembled those of Easter Island in their enormous ears and their unformed lower bodies resting on stone platforms. Moreover, it is said that on Pitcairn there was formerly a considerable *marae*, ornamented at each corner with a nine feet tall stone man mounted upon a platform of smooth stone. (*Ibid.*) Routledge (1919, p. 313) however, referring to an unspecified Pitcairn *marae*, mentions only one statue which is said to have been on it at one time, whereas she visited an artificial embankment on the coastal cliffs of the same island, where also vestiges of images were found: "In general it resembled to some extent one of the semi-pyramid ahu of Easter, but dense vegetation and tree growth rendered it impossible to speak definitely, ... It was remembered that three statues had stood on it, and that one in particular had been thrown down on to the beach beneath. The headless trunk of this image is preserved, it is 31 inches in hight, and the form has a certain resemblance to that of Easter Island, but the workmanship is much cruder."

It is interesting to bear in mind that when the mutineers from *Bounty* settled Pitcairn the island had no population but only *maraes*, bones and ruins from a former occupation. As Duff (1950 b, p. 9) points out, archaeologically Pitcairn is important, since its vestiges show it was only reached by the earlier, not by the later, Polynesian migrations.

The Puamau megalith site

The principal statues in the Marquesas group are raised in a cult site at Puamau Valley, right beside the uninhabitable east point of Hivaoa Island. During my visit there in 1937 the local white resident, Henry Lee, was convinced that the people who had raised these abandoned monuments must either have chosen this extreme eastern valley because they originally made landfall from the east, or else they must have been sun-worshippers, as the principal valley, Atuona, and all the other inhabitable areas were further west on the extensive island. In Puamau the fishermen's canoes were not even sheltered from the open ocean, which rolled straight up the beach in a roaring surf, driven by the perpetual eastern trade. This practical observation by one who had spent a lifetime among the local natives may well recall that the Rano-Raraku quarry is at the eastern corner of Easter Island, which is the easternmost land of Polynesia. Rivers (1915, p. 431) comments on the only form of worship observed by the discoverers to that island: "Roggeween and his companions observed the inhabitants of Easter Island prostrating themselves towards the rising sun, but as these prostrations seem to have had some relation to the stone statues of the island, it would be dangerous to conclude that the sun was the object towards which the prostrations were directed."[1]

[1] Roggeween (1722, p. 15) wrote himself: "...we noticed only that they kindle fire in front of certain remarkably tall stone figures they set up; and, thereafter squatting on their heels with heads bowed down, they bring the palms of their hands together and alternately raise and lower them." And Behrens (1737, p. 133): "They kindled many fires by their idols, either by way of offerings or for the purpose of prayer. In the early morning we looked out and could see from some distance that they had prostrated themselves towards the rising sun and had kindled some hundreds of fires, which probably betakened a morning oblation to their gods."

If the megalith sculptors of the Puamau valley worshipped the sunrise, then we are confronted with a *religion* corresponding to that of ancient Peru. On the other hand, if they settled the easternmost valley because they had come from a starting point in the east, then we are confronted with a *direction* corresponding to that of ancient Peru.

As on Easter Island, so also in the Marquesas, the present native population are above all wood-carvers, and make no claim that the large stone statues in their valleys were the work of their own carefully remembered ancestors from legendary Hawai'i. As on Easter Island, the Puamau natives possessed traditional names for most of the large images, the general name for which was Tiki, and they also had a vague remembrance that another people dwelt in the valley prior to their own coming. These earlier inhabitants fled to the surrounding hills, though a number of their women intermarried with the newcomers and so were among the ancestors of the present natives.

With a local native and the son of Henry Lee I climbed a crevice that took us through a narrow artificially roofed hole on the summit of a precipitous finger-shaped peak which rose above the palm-forest behind the image site. A few stone terraces, built either for defence or for a religious purpose, were found on the sloping base of the peak, and a platform nicely paved with smooth slabs and still partly surrounded by a megalithic wall was found on the narrow summit, commanding a perfect view of the bay and the now overgrown image-site below. The whole construction was very similar to fortifications in ancient Peru, and a small store of sling-stones were still *in situ*, an interesting detail, since Emory (1942 b, p. 131) has particularly pointed out that the sling is one of the culture elements which Polynesia shared with Peru.

Subsequent Marquesan sculptors have adapted the conventional style of some of the larger monoliths to miniature house images of stone[1] or wood, but apart from this continuation of style we have ample evidence that the early Puamau sculptors were also interrupted in the midst of their megalithic work. On the terraced temple site some of the great statues have been deliberately overthrown and demolished, but one of those found in the undergrowth had never been finished by the sculptors. Unlike those on Easter Island, these Marquesan images seem to have been transported from the quarry before their completion. Another statue was left behind unfinished in one of the quarries located in a different part of the valley, and in the same place several other carved stone blocks had been abandoned by the early workmen. Yet one of the Puamau quarries seems still undiscovered, for, as on Easter Island and at Tiahuanaco, the sculptors were not satisfied with just one sort of workable stone. Some of the Tiahuanaco figures were specially carved from a reddish sandstone, among them the two bearded figures of Tiahuanaco and Mocachi. The Puamau sculptors had easy access to a fine-grained and polishable grey tuff which had been utilized for a few of their best executed figures, and yet they have given themselves the trouble of carving some of the statues from a very

[1] These statuettes averaged 6 or 8 inches in height, and are still occasionally found in burial caves and even in native possession. Among a few archaeological specimens of stone secured by the present author, one unusual type had a wide projecting lower face like a beard, and a remarkable straight and narrow nose (Plate LI **9**); another had most contours weathered away but was made from a selected red volcanic rock (Plate LI **8**). Porter (1815, Vol. II, p. 114), during his early visit to the Marquesas, was the first to suggest that the large prehistoric stone statues seen by him in Nukuhiva may have served "as the model of perfection for all the sculptures of the island..."

unsuitable coarse-grained but reddish tuff, much like that used for the top-knots on Easter Island.

The tallest of the still standing Puamau stone men has a visible portion of a little over eight feet (2.5 m), in addition to the pedestal sunk between the stones of the platform. Its left arm is intentionally broken off, as also the entire upper section of a statue to the left of it. One of the fallen statues measured about eleven feet before its head was broken off. In the same valley a considerable number of small and beautifully executed images have been moved away from their original sites by the present native population. Some of these, about three feet tall, are carved from white stone and include sepcimens with ear-lobes stretching to their shoulders. Statues of this latter type concur in size with the average of those scattered about the Titicaca basin and found sporadically in South America from Colombia, east and south through Venezuela, Ecuador and Peru, as far as the Tiahuanaco area of Bolivia.

Such figures, from two to six feet tall, were found on most of the principal islands in the Marquesas Group, whereas giants of superhuman size, comparable with those of the Puamau valley on Hivaoa are otherwise only found on Nukuhiva. Here, too, the image-site is not in the main valley, but on a terrace on the side of a steeply sloping hill at Taipi (Typee),[1] one of the lesser valleys further east. The statues are described by Freeman (1921, p. 62): "The images, which had been set at regular intervals around an open stone-paved court, were from six to eight feet in height and averaged about three feet in thickness. We estimated each to contain from forty to sixty cubic feet of hard basaltic stone, the weight of which must have been several tons. As raising so great a weight up the sixty or seventy per cent incline from the valley would have been almost impossible, and as no outcroppings of stone of similar nature appeared nearby, we were forced to the conclusion that the material for the images must have been quarried out at some point higher up the mountain and laboriously lowered to the terrace prepared for them. ... some of the roughly squared rocks in the foundation of the shrine are approximately three by three by ten feet in dimension, and must have taken a small army of men to move and set in place."

The author shows that all these statues were thickly coated with moss. Eleven of them were still in their original position, two had fallen and several unoccupied niches seemed to indicate that there should have been more. Again, in spite of the marked historical-mindedness of the Marquesan tribes, who preserved their genealogical records in a system of knotted strings, they were highly neglectful of the monoliths on their own hillside. Freeman says: "Though this discovery lies within 300 yards of the main trail up the Typee Valley, no native on the island, either by actual knowledge or through tradition, has been able to shed light on its origin, purpose or probable age."

The Necker Island statuettes

A more complete picture of the distribution of stone images in Eastern Polynesia, requires the inclusion of the archaeologically significant statuettes on Necker Island in Hawaii. When this barren and treeless island was discovered by La Perouse in 1786, it

[1] Note that this valley has an aboriginal native name which reappears south of Tiahuanaco. (Part X.)

was entirely deserted and uninhabited, and the Polynesians on the inhabited Hawaiian islands were apparently unaware even of its existence. (Emory 1928, p. 3.) Yet the little island is covered with vestiges of a former occupation, and in his interesting survey of Necker archaeology Emory (*Ibid.*, p. 112) concluded that these remains must be ascribed to an earlier culture distinct from anything known among genuine Hawaiians of historic time. It is possible that when the present Hawaiians arrived, part of an aboriginal people fled for refuge to this lonely island. Emory's survey convinced him that, in view of the available evidence, it was reasonable to adopt the view that the Necker culture represents a "pure sample" of an earlier culture prevailing in Hawaii before the present Polynesian occupants arrived, whose ancestors established a new culture and new lines of chiefs all over Polynesia some thirty-two to twenty-four generations ago.

An important aspect of this early Necker culture, with special interest to this discussion, is the local discovery of a number of small stone images, carved so long ago that weathering has more or less defaced them all. (See also Alexander 1909.) Their sizes range from eight to eighteen inches high, and they are sculptured from a hard vesicular basalt. Emory (*Ibid.*, pp. 111, 118) has shown: "For comparison with the Necker images no examples of sculpture have been found in Nihoa. Few genuine Hawaiian stone human figures are known and these are the roughest crudities, lacking in uniformity." Also: "It should be noted that no stone human images are recorded from central Polynesia or Micronesia, and extremely few from Melanesia."[1]

Emory finds instead that, despite the stamp of local convention, the Necker statuettes display a rather noticeable similarity to the images of the Marquesas Group. He writes (*Ibid.*, p. 112): "In this light the comparatively strong similarities which exist indicate that the Necker images were like the Marquesan images before they took on the familiar convention. It is interesting to note that the inscribed stone idol in the Kalasasaya palace, Peru [i.e. Tiahuanaco], as illustrated by Posnansky (1914, frontispiece) has as many points in common with the Necker images as have the Marquesas. Although the mouth, in being tongueless and proportionally narrow (the lips are parallel and in relief), is not so much like the mouth of the Necker figures, as is the Marquesan, the square eyes in relief and the straight nose in the same relief are identical with the Necker eyes and noses."

This apparently casual reference to Tiahuanaco art form in relation to the Necker stone figures will acquire additional interest when we see shortly that, through intermediate forms in southeast Polynesia, even the stone-lined temple platforms associated with the images in these two areas are fundamentally related.

The general analogy between Andean and East Polynesian stone human statues

Since we now have ample evidence that neither the present Maori-Polynesians in the East Pacific nor the historically known Chibcha, Quechua, or Aymara of the Andes are responsible for the abandoned stone images and statues left in their own habitats, we may, so to speak, cut away all these superimposed tribes, languages, and cultures as mere secondary overgrowth, concealing and confusing our view of the possible continuity

[1] Ellis (1829, Vol. IV, p. 429), in describing how the early missionaries destroyed such pagan remains as the large wooden images and carved mortuary posts of Hawaii, added: "Some of their idols were of stone."

behind the makers of the earlier stone carvings. Disregarding the ever-present stamp of local style or convention, we shall immediately discover that all these anthropomorphic stone figures have one characteristic in common: they were associated with unroofed religious sites, and wherever information is available they all represent ancestor gods and genealogical heroes.

Furthermore, although human in shape and details, they are all wilfully distorted in their proportions, with their heads always enlarged quite beyond reason. Thus Emory (*Ibid.*, p. 102) says of the large-headed Necker statuettes: "The head is more than a fourth the height of the body, and in some more than a third." Linton (1925, p. 71), in his work on the archaeology of the Marquesas, says of the local stone figures: "The head was evidently considered the most important part of the figure, and upon it the artist expended his greatest skill. The legs were considered least important; in many figures they are shortened disproportionally or even omitted." Further: "All the heads are disproportionally large, some of them forming a third of the total height of the figure." Métraux (1940, p. 293), quoting Lavachery, says of the Easter Island statues: "The long head is about three sevenths of the total height of the statue."

Comparable proportions can be seen on all the Polynesian monoliths. Turning now to Bennett's (1934, p. 464) survey of those of Tiahuanaco, we read again that: "The height of the head is from 28 to 40 per cent of the total figure height." The same remarkable proportions are found on all Andean anthropomorphic statues, including those of San Augustín.

The large statues of the Tubuai and Marquesas group were carved at full length and extended downwards in one piece to a large pedestal sunk into a foundation, in full accord with the fashion both in Tiahuanaco and San Augustín. Thus they rest with their feet visible above the ground, unlike the larger monuments of Easter Island, where the submerged base of the image is considered wholly unimportant and often leaves a casual observer with the false impression that the Easter Island statues consist of nothing but heads.

This reverence for the head is even more strongly demonstrated by some of the Marquesas stone images. As Linton (1925, p. 81) expresses it: "The great importance attached by the Marquesan sculptor to the heads of figures probably led to the practise of making heads to which no bodies were attached. Most of these heads were used as architectural decorations, but two very large ones in the temple of Oipona, Puamao, Hivaoa, seem to have had a significance similar to that of the true images."[1]

Posnansky (1914, p. 87) has shown how a number of loose stone heads have been found at the site of Tiahuanaco, some of which may have been architectural decorations such as are seen also on the stone walls at the Chavín site (Pomar 1949, opp. p. 49). Stone heads without attachement to any body occur occasionally around Lake Titicaca and on its islands, and also northwards through the Andes (*Ibid.*; Bennett 1934, p. 482), more especially at San Augustín, where a single monolithic head is 8-9 feet high (Barrades 1943, Plates 72, 156; Bennett 1949, p. 79).

We have already seen that the custom of carving colossal stone heads can be traced right back to the unidentified people behind the so-called "Olmec" culture of Southern Mexico.[2]

[1] The large stone head of Plate LVI **2** was found by the present author in a district at Hivaoa where no other images were seen.

[2] Stirling's opinion (1940) is that the "Olmecs" seem to have a central position in the local American culture

The people who left behind these giant Mexican heads had also carved their ears holding immense circular ear-plugs decorated with a cross, and they had placed them on paved stone foundations, facing east. (Stirling 1940.) We have seen that a Caucasoid race-type with aquiline profile and strong beard occurs locally in strange contrast to the otherwise primitive-looking, flat- and broad-nosed faces depicted in these giant Olmec heads. The most logical inference from this observation would seem to be that the aristocratic and sophisticated type may depict the creative powers behind the artistically and technically involved megalithic scheme, and that the flat-nosed, indolent-looking stone heads perhaps are carved as ancestor figures for the more primitive labouring people among whom the bearded men had settled as an aristocracy. As already mentioned, a corresponding divergence of types is marked among the Tiahuanaco monoliths.

A similar reasoning could answer the problem why the Marquesan and Easter Island statues, both within Polynesian limits, seem to depict a contrast of race types. It has been said (Lehmann 1933) that the diabolical primitive physiognomy of the Marquesan statues, so distinct from their Easter Island counterparts, may be explained by taking the former to represent mortuary images, the large mouth and the enormous circular eyes corresponding to the skull with its open mouth and orbits. This explanation does not seem convincing, since the eyebrows, the huge fleshy lips with wide superimposed nostrils, and the big ears of the Marquesan figures are not seen on a skull. Those who claim that the early Marquesan race and culture contain certain Melanesian aspects, and that the statues depict the Melanesian physiognomy, seem to have better founded arguments. Still we must admit that we need better evidence before concluding that these grotesque and almost diabolic countenances are intended to depict Melanesians. Similar countenances are also depicted at San Augustín in the northern Andes, where nobody has yet claimed a Melanesian intrusion. (See Plates XLII, LVI.) If the aristocracy behind the stone-shaping art had come from South America, local maritime serfs and labourers (see Part VIII) might have manned their craft down-wind from South America more easily than Melanesians could have been fetched from the other extremity of Polynesia. The Melanesian element in Polynesia is admittedly so negligible that the bulk of the early *Menehune* working class could hardly have had Melanesian affiliations.

In view of the evidence accumulated in Part IV, I wish tentatively to suggest that in Easter Island the statues depict the migrating culture-bearers behind the whole series of megalithic sculpture, the same race which is depicted on the bearded monuments and effigy jars of Mexico and Peru; whereas in most other cases, as with the Olmec stone heads, the majority of statues from San Augustín to Tiahuanaco, and the Marquesan giants, the work has been accomplished mainly with the aid of subjugated peoples whose grotesque ancestor images have been carved to establish a religion intended to allure and impress the working classes in question.

Thus the same race may have originated the Marquesan and the Easter Island monoliths, though the former statues are carved in the image of a low-browed, flat-nosed, flat-faced and thick-lipped people, while the latter represent a people with a long, narrow face, straight

complex: "Present archaeological evidence indicates that their culture, which in many respects reached a high level, is very early and may well be the basic civilization out of which developed such high art centres as those of the Maya, Zapotecs, Toltecs, and Totonacs."

nose with narrow and prominent ridge, deep-set eyes, thin, sharp, protruding lips, and a long extended chin which is drawn out to a wide, sharp ridge. Though with different talents and means of expression, the artists behind the Vera Cruz slate-mirror, the stelae in Southern Mexico, the Early Chimu effigy jars, the bearded statues of Mocachi, Tiahuanaco, Arapa, and Cacha, and the Easter Island monoliths have all striven to reproduce a series of individuals which all leave us with the same racial impression, otherwise alien to these areas, and resembling in many ways our own race.

We have seen earlier how the consistent use of heavy nuggets in the ear and a fillet round the head has followed this race type from Vera Cruz to Titicaca. Bennett (1934, p. 469) says of the red sandstone figures at present standing in front of the Tiahuanaco church: "The headbands are wide and decorated with a scroll groove which gives the whole band the appearance of a twisted turban." Posnansky (1914, p. 87) similarly says of the loose stone heads of Tiahuanaco: "Many of them show a fillet-like headwear resembling a turban, and a strongly projecting under-jaw, stretched out in the length, which it is likely may indicate a bearded chin." Kidder (1943, p. 29) also mentions how some of the north Titicaca stone images have "heavy protruding chins", and stresses that the head-band is everywhere important on the statues in these parts.

Generally carved as a wide, raised band round the upper head, this ornamentation is one of the local conventions most consistently adhered to, whereas on some of the larger Tiahuanaco monoliths this band takes the shape of a superimposed double cylinder, remarkably like the *pukao* or top-knot on the Easter Island statues. On many Marquesan monoliths, and most emphatically on the many smaller stone statues of the Puamau valley, a wide and raised headband is elaborately carved round the upper head of the figures in a fashion identical with that used in the Titicaca area. Even an examination of the weathered stone giants of the Oipona temple terrace reveals very plain marks of a fillet-like head-band around the upper head.

The reason why these megalithic artists seem to have concentrated their efforts on the carving of the head may well be that the face, more readily than the limbs and the body, could express distinction in race-type. Body and limbs on the other hand would only emphasize the similarity of the subjugated natives to their own divine hierarchy, and should not be made the centre of attention. The heads of important persons are often removed for separate preservation among the aboriginal peoples in both Peru and Polynesia, and to judge from Nazca and Chimu paintings and other early Peruvian art, trophy-heads seem to have been the victors aim there as in Polynesia and on the Northwest Coast.

Owing to the colossal heads on these images very little room is left for shoulders; the neck is always omitted, and it often seems that the sole reason for carving a body is to form a background for the arms. The important point about the arms does not seem to be their shape, but their particular posture. Some slight freedom in the position of the hands may be seen on the mainland, but there too the hands are almost invariably placed on the chest or the stomach in a ceremonial way, and this frequently stiffens into a highly conventionalized form met with all the way from Mexico and Central America to San Augustín and Tiahuanaco. This same conventionalized posture is carried into the Pacific, where it is universal on the Easter Island statues and more typical still on the hundreds of statues and statuettes in the Marquesas. The typical features of this pose is that the vertically

carved upper arms are withdrawn often in a strained way towards the back of the figure, with the elbows bent at right angles and the lower arms placed horizontally round the body to make the hands meet on each side of the stomach just below the chest. In a few cases one of the hands is raised above the other to rest nearer the chin. (Tiahuanaco, Mocachi, Huancane; Marquesas, Tubuai.) It looks as if this artificial pose had some religious significance.[1]

Below the arms these American-Polynesian statues and statuettes generally terminate in thick, clumsy and stunted legs, about as long as the head or even shorter, if not omitted. On larger statues the monolith often continues below the feet as a peg-shaped submerged pedestal.

Only one more detail requires attention. Describing the bearded monolith of Tiahuanaco, Bennett (1934, p. 442) wrote: "Below the arms is a narrow undecorated waistband." To which he again referred later (*Ibid.*, p. 465): "All the figures have a wide, flat waistband, decorated in low relief or by incision." When Routledge (1919, p. 187) made her interesting survey of the Easter Island statues, she also examined their lower, submerged sections, which, she says, "when excavated, proved, to our surprise, to possess a well-carved design in the form of a girdle shown by three raised bands, this was surmounted by one or sometimes by two rings, and immediately beneath it was another design somewhat in the shape of an M. The whole was new, not only to us, but to the natives, who greatly admired it. Later, when we knew what to look for, traces of the girdle could be seen also on the figures on the ahu where the arm had protected it from the weather."[2]

The prone statues of Puamau and San Augustín

We cannot leave these anthropomorphic monuments without reference to a single and remarkable specimen from the megalithic image-site of the Puamau valley, Marquesas. This remaining monument is quite unique at least in Polynesia and the entire Pacific island world. It rests on the lower platform of the Oipona temple terrace, but is made to lie horizontally instead of standing erect like the others. Worked in one piece, with its supporting cylinder-shaped pedestal extending downwards from the abdomen, it stretches its five-feet length in a prone position, almost as if swimming. During my visit to the valley I examined this beautifully executed monolith with some care, and noticed some surface irregularities where the pedestal emerged from the ground. On the dirt being removed from the base of the pedestal four figures carved in relief round its base were exposed. The one at the front and the one back were greatly stylized human figures each enclosing a distinct cross. The other two, sculptured one on each side, were animals with long body and raised neck, a stubby muzzle, rounded ears, a raised tail and stunted, deformed legs. (Plate LIII **2**, **4**.) Each

[1] It has been suggested that this pose is perhaps practical for the carving. This is not so. When, as in the Marquesas, the same pose is transferred to the *Tikis* carved in wood, the lower arms must be cut against the fibres of the wood. Images among peoples in other parts of the world certainly do not adhere to this peculiar posture.

[2] Apart from the important girdle, the bodies of the Easter Island statues were undressed and unornamented; the arms were flexed and the long-fingered hands met over the abdominal region near the navel.

of these animals was 19 inches long, but one was almost worn away by erosion. The discovery was new even to the Puamau natives, who were most excited when they saw the exposed figures.

My first impression was that these two animal figures carved in relief on the pedestal depicted some sort of a dog, but a dog quite distinct from what little is known about the extinct Polynesian *kuri*, for it had a strangely erect and bare tail, rounded ears, and a long even body. Only when later confronted with illustrations of the two four-legged, long-bodied, round-eared, and slim-tailed animals carved in relief in a corresponding manner on the base of the bearded Tiahuanaco monolith, did I begin to wonder whether the two animals similarly reproduced on the Puamau statue could have been based on a former symbolism rather than on an unidentifiable type of dog used as actual model. The animals on the Tiahuanaco monolith represent the locally important feline symbol, the puma.

Even more remarkable than these animals carved on its base, is the main figure itself. We find no analogy on any of the other islands, and we would have been led to assume that this was an unorthodox and original creation of the otherwise conservative Marquesan artist, had it not been for the fact that a completely analogous monolith has been discovered at San Augustín, the gateway to Andean cultures. The close affinities between the general type of monolithic statues left in these two areas have already been mentioned. With the added convergence of the two exceptional prone figures the likelihood of an underlying relationship seems quite insistent; the similarity is too peculiar to be the work of independent thought. Both specimens are somewhere near five feet long (that from San Augustín is 176 cm and that from Puamau 150 cm); both are strangely stretched, horizontally on their abdomens, in a strained pose. The very short, bulky arms are bent forwards, one on each side of the face which is so large that the hands do not project in front of it. In both cases the body is extremely broad, stocky, and short, with very stunted legs bent at the knees with the feet turned backwards. The round head is huge, bent back without a neck and looking forwards and slightly upwards. The eyes in both cases are large, the nose very broad and very flat, and the mouth is simply enormous, carved on both as a long and narrow oval spanning the entire lower portion of the face from one side to the other, leaving space neither for cheeks nor chin. The figures have no dress or ornament other than a strange object on top of the heads; it is carved as a flat, wide crest, slightly raised, curving across the crown with almost identical size on both figures. The only difference is that in the Marquesas it is placed sideways over the crown instead of lengthwise as on the San Augustín specimen. (Plate LIII.)

What Preuss (1931, Vol. I, p. 83) says of the San Augustín statue is as true of the Marquesan replica: the stretched-out posture is unnatural even for an animal. He wonders whether the figure can represent a dog rather than a man, but finds the nose, like nearly all the rest of the face, to have a human aspect; and this may be said of at least all the front part of the sculpture. Only the unformed rear end, projecting between the stunted legs of the San Augustín specimen, might suggest an animal rather than a man.[1]

[1] Nowhere else to-day do we find a stronger similarity to this South American statue than on the said eastern extremity of Puamau in the Marquesas Islands. But some vague resemblance might be found in certain more zoomorphic altar stones and images in ancient Mexico. A good example of these is the crouching feline animal from Izapa reproduced after Stirling (1943, Pl. 59 b) in Plate LIII **8**.

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Certain Easter Island statues originally had huge hat-like cylinders of a reddish volcanic tuff placed at the top of their heads. The natives referred to them as top-knots, the local form of masculine coiffure. **1** and **4** top-knots from fallen Easter Island statues. (From *Casey 1932*; *Routledge 1919*.) **3** Excavated Easter Island statue. (From *Routledge 1919*.) Similar ornamentations occur on statues from San Augustin, **2,** (from *Barradas 1943*), and they are even more common in Tiahuanaco, **5, 6.** (Photo: *Musée de l'Homme*.)

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L. Larger stone statues in South America and Polynesia were carved with a pedestal submerged in the ground beneath the feet of the figure. **1** San Augustin. (From *Barradas 1943.*) **2** The Marquesas Islands. (Photo: *T. Heyerdahl.*) **3** The Tubuai Group. (Photo: *B. P. Bishop Mus.*)

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Small stone statuettes in human form are widespread from Mexico to Peru. A similar type occurs on the nearest islands in the Pacific, i. e. Eastern Polynesia. But in Central and West Polynesia, and in Micronesia, no stone statuettes of any sort were carved. **1-3, 5** Mexico, **4** Colombia, **6, 8, 9** Marquesas Islands, **7, 10** Titicaca basin, Peru. (Photos: 1-6 *Musée de l'Homme;* 7, 10 *Peabody Mus., Harvard Univ.*; 8, 9 *T. Heyerdahl.*)

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Stone men in the Andes. **1** Tiahuanaco, Bolivia. (Photo: *L. D. Gismondi.*) **2** Aija, Peru. (From *Bennett 1944.*) **3** Conima, Peru. (Photo: *Peabody Mus., Harvard Univ.*) **4** Mocachi, Peru. (From *Casanova 1942.*) **5, 6** Huancane, near Tiahuanaco. (Photo: *M. Portugal.*) **7** San Augustín, Colombia. (Photo: *John Costa, Black Star.*)

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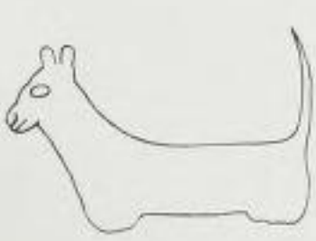

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The prostrate monolith. On the prehistoric temple site on the east coast of Hivaoa Island, Marquesas, an anthropomorphic statue is carved so as to remain prone, supported by a pedestal extending from the stomach into the ground. **1, 3, 5, 6** side and front view of same. **2, 4** an animal figure in relief on each side of the pedestal. (*Heyerdahl 1938; 1941 a.*) **7, 9** Corresponding prostrate monolith from San Augustín, Colombia, seen from above (**7**) and from the front (**9**) (from *Preuss 1931*); and **8** a somewhat analogous altar stone from Izapa, Mexico. (From *Stirling 1943.*)

Stone giant of Raivaevae Island, Tubuai group, Southeast Polynesia. (Photo: *B. P. Bishop Mus.*)

Stone giants of San Augustin, Colombia, South America. (Photo: *John Costa, Black Star.*)

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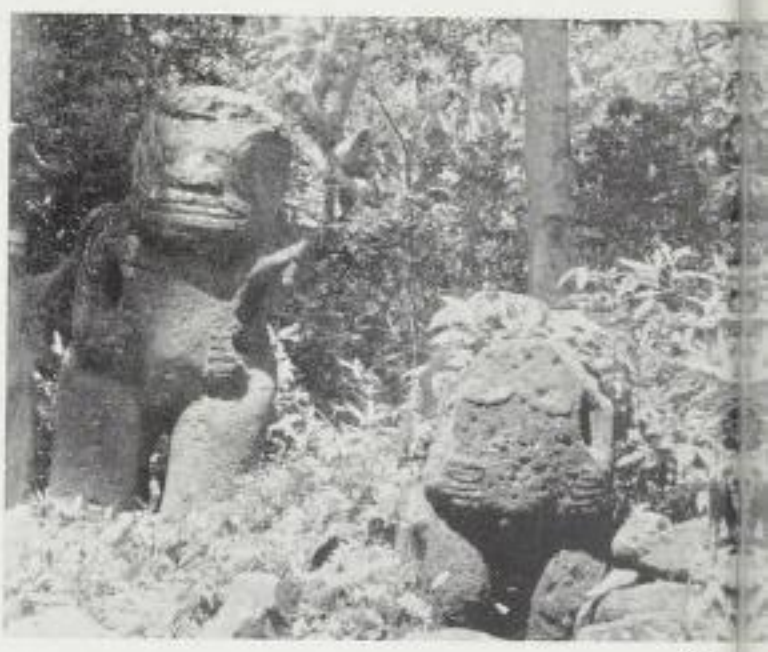

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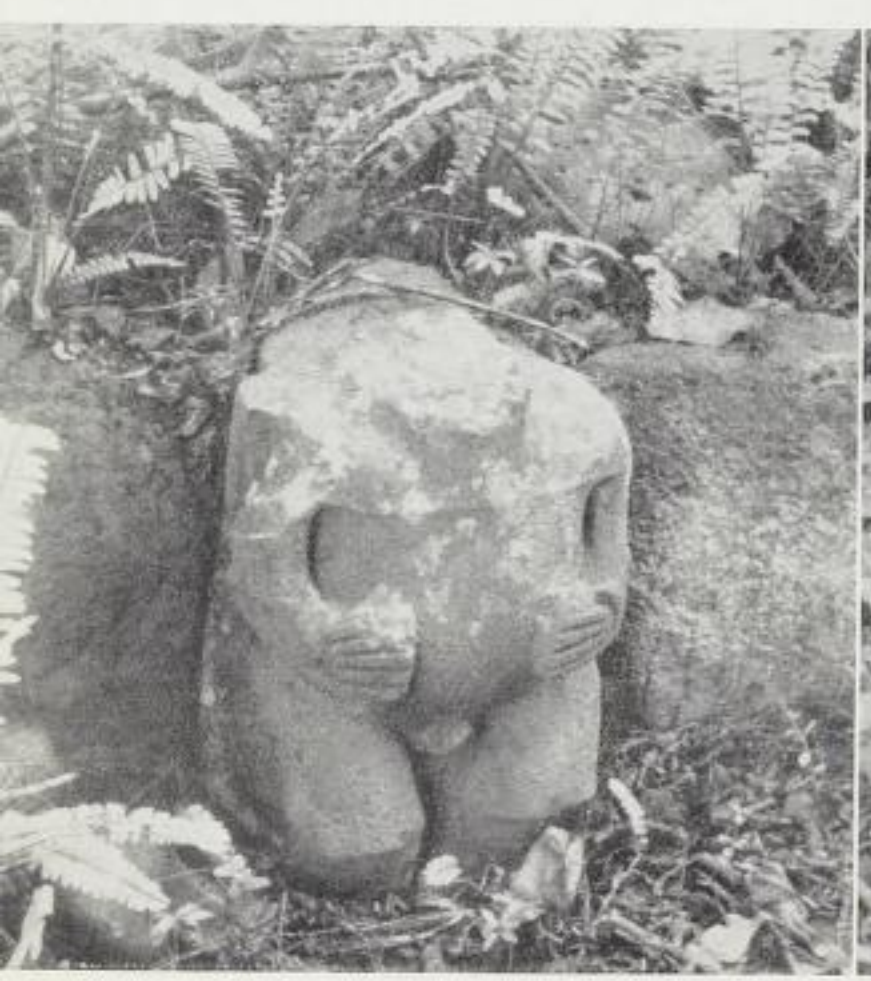

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Grotesque faces with huge circular eyes, flat, wide noses, and large oval mouths. **1** from San Augustin. (Photo: *John Costa, Black Star.*) **2, 3** from Hivaoa Island, Marquesas. (Photo: *T. Heyerdahl.*) **3, 4, 5** broken and overthrown statues, Hivaoa Island. (Photo: *T. Heyerdahl.*)

The easterly oriented distribution of cut stone technique in Polynesia

The anthropomorphic monoliths and statuettes of Eastern Polynesia represent perhaps the most distinguishable religious structures of the East Pacific. Closely associated with this culture element are ecclesiastical constructions some of which consist of carved and dressed stones arranged as enclosures or elevated platforms.

It is not surprising that a stone-shaping neolithic people, capable of working monoliths into human form, were also experts in forming and dressing slabs for ecclesiastic masonry and other religious purposes. The people who spread the stone men into eastern Polynesia must automatically be suspected also of having introduced the generally associated religious buildings. Nevertheless, we shall look away from what we have found with respect to the anthropoliths, and consider the other stone structures as if they were independent culture traits. Thus we shall first see whether the carved stone masonry may have entered Polynesia from the west.

Buck (1930, p. 670) has reviewed the stone structures in the Samoan group, which would be the geographical gateway to Polynesia for migrants entering this part of the ocean from the west. He shows that Linton, who had listed the absence of cut stone in Samoa, formed one exception in some wall posts in an ancient stone house (Fale-o-le-Fee) near Apia. Buck shows that even this was a false alarm, as he calls attention to the fact that "the stone wall posts consist of natural basaltic prisms that the hand of man took no share in shaping. Connected with the negative condition in Samoa is the absence of stone figures of human form, which are a feature of eastern Polynesia."

In stressing the total absence of cut stones in this western sector of Polynesia, Buck also searches in Samoa for structures comparable to the characteristic forms of religious buildings in the image area further east. Under the heading "Stone structures" he says (*Ibid.*): "In Samoa, the marked feature in stonework is the absence of stone religious structures corresponding to the marae of the east central area and the heiau of Hawaii. The lack of remains of such structures may indicate that the marae type of religious structure came east by a more northerly route that missed Samoa, west from America, or was locally developed in the east central area." Leaving us with these three remaining choices, Buck gives precedence to none of them. It may be interesting to examine them one by one.

If the cut stone technique or the *marae* type of religious structure came east by a more northerly route and thus missed Samoa, it must have passed through either the Gilbert or the Ellice Islands. Since these atolls contain no religious structures corresponding to the dressed stone *marae* of east central Polynesia, they may be ruled out, with the entire Micronesian route, as a possible stepping-stone to East Polynesia, by the same argument by which Buck himself ruled out Samoa. We are thus led to admit that the Polynesian stone-cutting technique, as well as the dressed stone *marae*, was either developed locally in East Polynesia, or else, like the stone men, brought from South America.

Turning our attention now from Samoa and the west to the opposite gateway into Polynesia, the island nearest Peru, we find a strikingly different picture. Métraux (1940, p. 290) writes : "Cut stones were used extensively on Easter Island. Dressed slabs or blocks are found on most of the big ahus and appear in structures such as wells and under-

ground houses, and in the stone houses of Orongo. ... The excellence of Easter Island stone work is due partly to the use of hard vesicular basalt. Though cut stones were not so common on Easter Island as in the Marquesas, they show a more elaborate technique. ... The facings of a few Easter Island ahus are among the most perfect masonry work in Polynesia. The slabs or blocks have not only been smoothed to evenness, but they have been dressed or selected so as to fit exactly. The masterpiece of Easter Island stone work is the ahu Vinapu: The seaward wall is made of two rows of marvellously smooth slabs whose edges join with mathematical accuracy. The corner slabs have been rounded. A hole in the face has been patched with a stone carved to fit perfectly. Such a facing resembles the famous walls of the Inca palaces of the Cuzco."

But having made this interesting admission, the author hastens to add briefly: "There is neither geographical nor chronological link between the two cultures." Yet a glance at the map makes one wonder what the author means by denying a geographical link between Easter Island and the Inca Empire, unless he is thinking of a head-wind journey up against the elements *from* Easter Island *to* Peru. One may be equally justified in wondering what he means by denying the chronological agreement between the famous Cuzco wall and that on Easter Island, for, as we have seen, some of the oldest and best executed sections of this great-stone masonry of Cuzco are associated with the Viracocha cycle and considered by competent archaeologists as dating back to the Tiahuanaco period in the Andes.

The skill and technical perfection embodied in just these particular ruined walls of Easter Island and Peru give them both an outstanding position among megalithic masonry in any part of the world, and yet the one is a close repetition of the other. Their striking resemblance had aroused comment by several earlier writers. (See Plate LVII.) Including in his book an illustration of the same Ahu Vinapu on Easter Island for the sake of its Peruvian characteristics, Imbelloni (1926 b, p. 327) says in his caption: "The blocks of lava material are worked with an admirable technique. For its dimensions, for the slightly convex surface, for the reciprocal disposition and the characteristic nature of the commissures, this masonry of the Pacific Ocean may be compared to the best of Peru."

At an earlier date J. M. Brown (1924, p. 257) had also observed, during his visit to Easter Island, that: "The cyclopean work of some of the burial platforms is exactly the same as that of Cuzco and the adjacent regions of the Andes. The colossal blocks are tooled and cut so as to fit each other. In the Ahu Vinapu and in the fragment of the ahu near Hangaroa beach the stones are as colossal as in the old Temple of the Sun in Cuzco, they are as carefully tooled, and the irregularity of their sides that have to come together are so cut that the two faces exactly fit into each other. These blocks are too huge to have been shifted frequently to let the mason find out whether they fitted or not. They must have been cut and tooled to exact measurements or plan. There is no evidence of chipping after they have been laid. Every angle and projection must have been measured with scientific precision before the stones were nearing their finish. The modern mason knows he can fill up irregularities with lime or cement. In these cyclopean walls the only cement is gravitation, and that can be used only once. With nothing but stone tools and these generally clumsy and rough, the result is marvellous."

The same author feels that much labour must have been present to haul, raise, and place the blocks. He adds: "But in cyclopean tooled work there is more; there must be skill in

planning what is to issue from a rough block, there must be breadth of architectural thought to mark out the place that each stone when shaped and finished has to take, and there must be also large drafts of that subordinate skill which knows how, with the tools at hand, the shapes in the architects mind and plans can be cut out of the roughly hewn blocks from the quarry, or the fractured rocks that lie about. There are implied in all these carefully tooled and fitted cyclopean walls limitless power and resources, the capacity for organizing great masses of men, keen architectural capacity and large armies of skilled labour."

We have seen above that to explain the erection of the local stone structures we need not look for more man-power than that which Easter Island could easily support, provided the people at work were already well trained to cooperate in this kind of work. There is accordingly no need to follow Brown in his unsupported speculation on land submergences, and we may benefit more from following his three pieces of actual observation, with the logical inference that seems to suggest itself from them:

(1): "In the Andes all conditions [for cyclopean masonry] existed. ... Tiahuanaco on the south of Lake Titicaca had plenty of stone and plenty of muscle to haul it; and the result is a gradual improvement of cyclopean stone-cutting and building till the stage was reached at which one huge block was cut to fit exactly into another."

(2): "The tooling and fitting of cyclopean blocks are exactly the same in Cuzco and in Easter Island."

(3): "On Easter Island there was plenty of stone, but nothing else to make the megalithic art possible..."

The readiest deduction would then seem to be that the great-stone technique which had a logical background in Peru had spread down wind to Easter Island with no necessity of a difficult local development in the latter place. [1]

Examples of elaborate cut stone masonry are found sporadically over the string of Polynesian mountain islands facing America, and as far west as Tonga, which must have evolved the idea locally or else received it from Eastern Polynesia, as it is absent in Samoa and the geographical neighbourhood to the west. This distribution of the stone-shaping art is highly suggestive. Handy (1927, p. 329), who is personally very familiar with this cultural achievement through his field studies in eastern Polynesia, writes: "The art of stone building may, of course, have been independently developed in Polynesia. ... But what probably happened is that during the hundreds of years of very active voyaging some Polynesians visited America and returned to Polynesia, having seen the Mexican or Peruvian stonework, and possibly bringing a few stone craftsmen with them. The fact that both in quantity and skill there is a diminution in the art of building with stone, beginning with the Marquesas, running through the Society Islands and ending at Tonga, is strong evidence in favor of the hypothesis that some eastern Polynesians, probably Marquesans,

[1] Cook (1777, Vol. 1, p. 294) who had an early opportunity of examining the Easter Island *ahus* while several of them were in a better condition than today, wrote: "They are built, or rather faced, with hewn stones of a very large size; and the workmanship is not inferior to the best plain piece masonry we have in England. They use no sort of cement; yet the joints are exceedingly close, and the stones morticed and tenanted one into another, in a very artful manner. The side walls are not perpendicular, but inclining a little inwards, in the same manner that breastworks, & c. are built in Europe..."

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borrowed the art of stone construction from the west coast of South America; and that within Polynesia the art spread from east to west."

As just quoted from Métraux, cut stones are even more common in the Marquesas group than on Easter Island. A great number of the Marquesan stone-platforms (*paepae*) are constructed as a masonry of large skilfully dressed stones some of which weigh several tons. In various parts of the group, especially in Hanavave and Omoa valleys on Fatuhiva, and Puamau and Hanaiapa valleys on Hivaoa, the present author visited a considerable number of religious structures lined with beautifully tooled and dressed slabs, preferably sculptured in a selected reddish tuff. Many of these bore notches and squares of mathematical exactness, and some, in the Puamau valley, had inserted in the masonry the most beautifully executed specimens of stone statuary to be seen in Polynesia. On others, human figures with arms half raised above the head were carved in high relief on the face of the tooled stone slabs, offering a most striking resemblance to the similar figures on the vertical wall of the sculptured stream bed at San Augustín. (Barradas 1943, Plates 143, 145; Steward 1946, Pl. 174.)[1]

In his survey of Marquesan archaeology, Linton (1925, p. 18) does not believe the cut stone technique to have been developed locally in the Marquesas, because there is no evidence of transition from the uncut to the elaborately cut stones.

Facing America in mid-ocean between the Marquesas and Hawaii lies little Fanning Island. Emory (1934 b, p. 15) has shown how this isolated speck possesses remains of religious dressed stone enclosures showing nicely fitted joints and even L-shaped cornerstones, a technique reminiscent of that used on some of the elaborate *maraes* on lonely Tongareva, west of the Marquesas, as well as in the Tonga Islands.

We have earlier seen that among the Hawaiian remains of the earliest island era was the Menehune watercourse at Kauai with its large megalithic wall, which has been referred to by Bennett (1931, p. 110) as the acme of stonefaced ditches. This dressed stone wall, carrying water round a precipice in a runway 400 feet long, is now nearly covered by a modern road, but was described long ago by Vancouver, who admired its exceedingly good construction, rising about twentyfour feet. Its dressed stones are squared off on all sides but the inside, and are fitted most skilfully together so as to present a smooth, even surface. Bennett (*Ibid.*, p. 105) says: "The size of the blocks shows great variation, some measuring 5 feet in length and over 3 feet in depth and width. There was no attempt to cut them all the same size. The masonry shows true coursing in some places, but it is by no means consistent, and many square joints, with the corners of four stones meeting at one place are found. The jointing found in several places has caused great comment."

The facing of the wall includes square joint, joint projecting from stone above into

[1] In Polynesia relief carving was used on a large scale only in the Marquesas and Easter Island, with a casual occurrence elsewhere, but always on the islands nearest to America. Métraux (1937 a) points to the striking resemblance which two figures in a Hawaiian relief carving display to some cat-like signs of the Easter Island tablets (see fig. page 505), yet he interprets the limited and casual distribution of relief carving in the eastern margin of Polynesia as "good evidence that this technique has developed independently in different islands and that there are no historical connections between the cultures which practised relief carving." In view of the similarity between the carnivorous animals carved in pairs in relief around the base of the Marquesan and Tiahuanaco stone statues referred to above, it may seem as if such a conclusion should perhaps be reconsidered. Sculptured reliefs, often representing feline figures, are not infrequent in the Titicaca area (Nordenskiöld 1907–08; Posnansky 1914; Rydén 1947; etc.) and occur in San Augustín (Barradas 1943, Plate 149; etc.).

notch in stone below, double joint, etc. (*Ibid.*, Pl. 3), all of which strikingly resemble the facing of pre-Inca walls in Peru.

The outstanding authority on East Polynesian stone-facing technique and stone religious structures is Emory (1928; 1933; 1934a; 1934b; 1939; 1943; 1947), and his attempt to analyse the inter-island relationship and common origin of this remarkable archaeological trait is also highly interesting and suggestive. Referring to the cut stone masonry of the Menehune irrigation ditch at Waimea, Kauai, he says (1933, p. 47; Italics by T. H.):

"All these features are to be seen among the dressed blocks now scattered through the village of Kailua on the island of Hawaii, incorporated in doorsteps, corners of stone buildings, or placed about as benches. They come from the facing of some structure, which once stood at the shore of Kailua bay. . . . We see now that the Kailua stones had been fitted into a facing identical with that of the ditch traditionally built by the menehunes at Waimea, Kauai. These facings differ in no important respect except for the occurrence of diagonal joints from the facings of notched-squared blocks to be seen on Meetia in the Society Islands, and if the two Hawaiian examples were executed by migrants from Tahiti one or the other or both of them must have been made before the time of Umi, who lived between 12 and 15 generations before 1900. . . . That the construction of facings of rectangular blocks of unequal size, necessitating in some instances the cutting of shoulders or jogs in order to bring the top of the finishing course at a level, is an old technique in southeastern Polynesia is clear from its appearance in prehistoric image platforms of Easter Island, where it is even more at home than in the Society Islands, the only other place in Polynesia from which it has been reported besides Hawaii. While it may have evolved either in Tahiti or Easter Island, *its appearance as the dominant note in the cut-stone facings of ancient Peru makes South America a possible source, with Easter Island, where its megalithic aspect brings it more in line with the Inca work, the introductory point.* As it is now generally agreed that the sweet potato in southeastern Polynesia is an introduction from America, and one antedating the final dispersals to Hawaii and New Zealand, it is quite within reason to entertain an American origin for a cultural element so specialized as this stone facing. It is a conspicuous element localized in the part of America nearest to Polynesia, a part where currents strike out and flow in the direction of Easter Island and the Tuamotus. This current in 1929 carried a flock of drums of gasoline from some wreck on the South American coast into the Tuamotus, bringing timely aid to the nearly exhausted supply of our party. May not one of the seagoing rafts of the early Incas have been swept into this current carrying survivors as far as Easter Island 2 000 miles to the west?"[1]

We have seen that Emory later abandoned his own theory on the assumption that the Peruvian balsa raft rapidly became water-logged and was therefore unable to take such a prolonged down-wind journey. However, since his informants were decidedly wrong on this point, Emory's original view with regard to a possible American origin of the cut stone masonry of Polynesia has proved to be sound and may well be revived.

[1] In his paper of 1943 on "Polynesian stone remains", Emory (p. 11) maintains that the Polynesians masons "*need* not have had any relations with South America to have produced what they did", but that they "*could* have learned some of the details of the dressing and fitting of stones from that region if they had had contact with that part of the world," whereas "the acquaintance which their ancestors might have had with similar work in Asia or Indonesia would have been a scant practical help."

Referring to the isolated stone-facing technique of Tonga, Emory (*Ibid.*, p. 50) says: "To the adjacent west we look in vain for such cut-stone work, but to the east is work from which the Tongan could be derived. All the typical facings of the Society Islands, even those of dressed stone, save the specialized facings of the coastal type of marae, are duplicated in Hawaii, but to such a feeble extent that it must be admitted that the Hawaiian equivalents are most likely derived from the southeast. The Marquesan, Austral, and Tongan cut-stone work is probably of more recent date than the Tahitian, and therefore due to Tahitian influence."

Of Tahiti the same author (1943, p. 10) writes: "For the working of hard basalt the Tahitians can claim the most distinction, although the Easter Islanders may dispute the claim. ... The Tahitians took small river boulders, flattened the top, bottom, and sides by the laborious pecking process, and so fitted them in even courses in the facing of their maraes." Thus in Tahiti marae constructions display more or less elaborate dressed stone facings, but also facings of natural water-worn stones. The even coursing in the facings of these water-worn stones may be the outcome of copying the dressed stone facings, and would seem to make, as Emory (1933, p. 49) points out, "an introduction from Peru more probable."

With the dressed stone facing technique of Hawaii, Marquesas, Tonga, and the Austral or Tubuai group all indicating a spread from Tahiti, or indicating at least a common origin with the equivalent Tahitian art, and with a probable source of the Tahitian technique among voyagers from Easter Island who perhaps again had inherited this highly specialized culture trait from aboriginal Peru, we find—now that the buoyancy of the balsa raft has been established—that we have the same probable origin for Polynesian dressed stone facing as for the local stone human statues.[1]

The marae or raised stone enclosure and related temple forms in eastern Polynesia and pre-Inca Peru

Having so far mainly considered the dressed stone facing technique as such, we may well see whether the same probability of a South American origin also holds good for the types of stone structures to which the masonry technique was applied.

It is a rather striking fact, worthy of the fullest attention, that the Polynesians, who had—principally on their easternmost islands—acquired this admirable skill in stone shaping

[1] Emory (1935, p. 177), in his discussion of the *Stone Remains in the Society Islands*, also brings up the interesting fact that petroglyphs are almost universal in Polynesia. He adds: "They are rare in Tonga and Fiji. The practice of making petroglyphs, therefore, seems a trait belonging rather to distal (with reference to Asia) Polynesia, than to proximal Polynesia (Samoa, Niue, Tonga, Wallis, and Futuna)." Emory feels that the more general type of petroglyphs found in Polynesia are so simple that no reliance can be put on them as proof of cultural contact. He says: "Even in the more elaborate figures possibilities of correspondence through coincidence are great. For example, the unique cross and Y markings on the body of the turtle [ref.] are exactly paralleled on the body of a human petroglyph in Brazil [ref.]. Masks, ceremonial costumes, and head-dresses are also represented by Brazilian petroglyphs [ref.], and I have seen them somewhere represented in petroglyphs in the West Indies. Yet these considerations do not leave the petroglyphs without value in pointing out cultural contact; they only warn against exaggerating the significance of identical forms." Other writers have pointed out that Polynesian petroglyphs point to America rather than Asia.

art with the most intricate forms of jointings and morticing, still had not acquired the idea of a keystone to hold an arch in position and thus permit roofed constructions. Ignorance of the principles of the arch is a basic feature in the early Polynesians' stone constructions, limiting their achievements to uprights, stone statues, walls and unroofed platforms. We may again quote Bennett (in Steward 1949, p. 53) concerning their former neighbours to the east: "Throughout South America in pre-European times some general principles of great importance were totally unknown, thus limiting engineering skills. Outstanding is the lack of knowledge of the wheel. ... Another notable lack was the true arch, with its primary keystone, which was a serious handicap in the development of architecture." This in itself places Polynesian and South American masonry architecture on the same level.

When we now come to consider the principal types of temple and ecclesiastical building in early Polynesia, we find them to fall into two main categories—stone enclosures and raised stone platforms. Both are found in a varying degree of elaboration, and elements from both are very commonly found combined.

We shall first consider the *marae*, which we have already found most likely to be an introduction from America or a local development in east central Polynesia. There is reason to believe that the *marae* as a religious structure belongs to an early era of Polynesia. We have already mentioned that it is found in Pitcairn, and that Pitcairn was only settled by the earlier wave of Polynesians. Emory (1928, p. 112) found the *marae* as a rectangular platform, lined with slabs and with uprights along the back, to be the principal ecclesiastical construction of the early Necker Island culture, which again he considered a pure sample of the culture prevailing in Hawaii before the coming of the present population. If the Menehune, as indicated above, were the manual masons of an early island era, then the Necker *marae* and statuettes would have been roughly contemporary with the Kauai aqueduct, like several other stone constructions of prehistoric Hawaii, most of which are accredited by the Hawaiians themselves to the work of the earlier Menehune.[1]

At the same time Emory points out that the Necker island *maraes* are most closely related to those common in the extreme eastern margin of Polynesia, facing Peru. He writes (1943, p. 13): "The Necker maraes, with their continuous row of uprights along the back of the platform, are most like the maraes of the more isolated eastern end of the vast Tuamotuan Archipelago. Although Necker was unknown to the historic Hawaiians, its ancient visitors certainly came from the main Hawaiian group, as the squid-lure sinkers and adzes found on the island are Hawaiian. Crude replicas of the Necker maraes were discovered by the writer in 1937 at the quarries of the adze-makers on the 12 500 foot contour of Mauna Kea, the highest mountain on the island of Hawaii. At Puu o Umi on the slopes of neighboring Mauna Loa, a low, narrow platform, bearing uprights similar to the Necker marae, has been photographed. [Ref.] But the Necker type of marae has been all but obliterated in Hawaii."

[1] See Part IV. Thrum (1907, p. 116) also says: "The Menehunes are credited with the construction of numerous *heiaus* (ancient temples) in various parts of the islands. The *heiau* of Mookini, near Honoipu, Kohala, is pointed out as an instance of their marvellous work. ... Another temple of their erection was at Pepeekea, Hilo, ... There stands on the pali of Waikolu, near Kalaupapa, Molokai, a heiau that Hawaiians believe to have been constructed by no one else than the Menehunes. ..."

This early Hawaiian type of *marae* had its counterpart also in the interior of Tahiti. Emory writes (1928, p. 117): "I have seen at one spot in the interior of Punaruu Valley, Tahiti, eleven maraes, and these happened to be in many essential features identical with the Necker Island marae." Two years later Handy (1930 b, p. 94) wrote: "It is interesting that it is in the interior of Tahiti, where the Manahune folk lived, that the expeditions of the Bishop Museum have discovered the most solidly built stonework."

This concurrence of data seems to indicate that the *marae* already had a wide distribution in eastern Polynesia in the early local era. In isolated Tongareva, where some of the most important *maraes* have been found, Smith (1890, p. 91) shows that according to tradition the first *marae* was built by the earliest immigrant settler to reach the island. He says: "The *maraes*, or sacred enclosures, some of which were as much as a hundred yards square, and where all the religious ceremonies were conducted, were enclosed by upright slabs of stone, standing as much as 6 feet out of the ground. Inside were other stones standing on end said to be tombs. There were several of these *maraes* in different parts of the group, some deserted and evidently not in use for ages."

There is a considerable inter-island variation in the Polynesian *marae*, from the low coral platform with small uprights along the end, so widespread in the Tuamotus (Emory 1934 a), to the more elaborate stone constructions of the Tubuai group, Raiatea, and Tongareva, with a whole fence of uprights of irregular size (up to 12 feet high in Raivaevae and 13 feet in Raiatea) marking out three or even all four sides of the rectangular platform. Aitken (1930, p. 118) describes a Tubuai marae as "a rectangular space bounded on three sides by a fence of stones set upright in rows like pickets." The uprights were all of irregular size, up to ten feet high above the ground. He quotes Seale, who measured one at 10 × 6 × 1 feet, and another at 9 × 9 × 3 feet. Some of these *maraes* were paved inside to a greater or less degree. "The amount of labor involved in the transportation of the stones to their final resting places in the maraes must have been enormous. Few of the large stones weigh less than ½ ton and the largest one measured weighs about 4 tons. . . . Furthermore, many of the maraes are at a considerable distance from places where such stones might have been obtained and some are at elevations above any possible source of supply."

Buck (1932 b, p. 152) says of the Mangareva type of *marae* that it generally has a rectangular ground plan, all four boundaries of which are defined by limestone uprights. The space between the uprights is filled with a single row of flat coral pieces set on edge. Part of the enclosure was paved, and the carved uprights had peculiar flanges and notches on the upper corners. To show its relationship to the other Polynesian *maraes*, the same author writes (*Ibid.*, p. 179):

"Emory draws attention to the resemblance between the small Tahitian inland marae and those of Necker Island. The large raised platform of the Tapu-tapu-atea marae in Raiatea shows the same technique of construction as those of Tongareva. Huge limestone slabs rising over 8 feet above the ground have been set on edge to form a rectangular enclosure which has been filled in to a height of 8 feet with coral boulders and rocks. . . . In spite of its size and fame, the structural technique and pattern is that of the simple, low platforms of Tongareva.

"It is apparent that an ancient marae structural pattern consisted of an open court with a raised platform at the end, formed of limestone slabs set on end, and filled in with loose

material. At the back, tall uprights that may have had some religious significance, or may have been purely ornamental, were set up. On Tongareva progress has proceeded in the direction of defining the boundaries of the court with curbstones and extending the stone uprights to all four boundaries."

The basic relationship between all these forms of east and central Polynesian *maraes* seems quite apparent. The question remains, however, whether the primitive open court with a platform and a single line of uprights only at one end really is the prototype from which the elaborate Tongareva platform, ornamented on all four sides, with tall stone uprights, has subsequently evolved; or whether the latter is the imported ancestral form which, on many small isles and atolls, has been modified to meet the requirements of communities with limited stone resources or more modest demands.

If we return to the image area about Lake Titicaca, we shall find that the essentials of the Polynesian *marae* are found in the Kalasasaya construction at Tiahuanaco. (Stübel and Uhle 1892; Posnansky 1914, pp. 107—114.) Kalasasaya is the main temple of this early abandoned cult-site, and it consists of large uprights defining a rectangular enclosure, 444 feet long and 368 feet wide. As on Mangareva, the carved uprights of this giant Tiahuanaco *marae* also showed curious flanges and notches on the upper corners. Here too the larger monolithic uprights were set in straight lines, and although carved they had no uniform size, and the space between them had originally been partly filled in with a line of smaller loose stones. Furthermore, it is noteworthy that the megalithic upright enclosure of Kalasasaya also had its base artificially raised as a large rectangular earth platform. Bennett (1934, p. 372) shows that this can still be seen, although a considerable amount of soil has been washed away since the pre-Inca times, and agricultural work inside the temple has in historic time assisted in wearing down the artificial terre-plein. Rejecting the unfounded view that the uprights are the remains of a retaining wall once entirely filled up with earth, he tends to support Posnansky's calculation that the raised earth platform formerly reached a level of roughly seven or eight feet (2.30 m) above the uneven plain, to judge from the height of the monolithic stairway that leads up to the rectangular stone enclosure from the east.

Referring to vestiges in early Peru of ecclesiastical architecture similar to that of Tiahuanaco, Bennett (*Ibid.*, p. 483) quotes Tello regarding sacred corrals in the Huaraz region of northern Peru, which "are formed of great stones, planted vertically and arranged in rows in the same style as the enclosure of Kalasasaya in Tiahuanaco." (Tello 1928, p. 279.)

Rydén (1947, p. 153) shows how sacred enclosures, built on Kalasasaya principles, have been found in various pre-Inca sites near the south end of Lake Titicaca, and that temples of this description include the ruin on the island of Simillake in the Rio Desaguadero, referred to by Posnansky, and the ruin recorded by Casanova (1942) on the image site of the bearded Mocachi statues on the Copacabana peninsula. Rydén shows further that stone statues, one of which is strikingly similar to the main statue at Mocachi, are left in the pre-Inca site of Huancané (Wancani), in the plains to the south of Tiahuanaco,[1]

[1] The archaeological site of Huancané was first described by Portugal (1937), and the present author is indebted to him for the photographs of the Huancané stone statues reproduced in Plate LII **5**, **6**. Portugal stresses the need for a serious attempt to compare the stone statues of eastern Polynesia with those of the Andean area, from San Augustín and southward to Huancané and the Lake Titicaca area. (Letter to the author dated July 10, 1951.)

and that here also they are associated with stone enclosures which "bear so close resemblance to those of Kalasasaya that ... they must be dated to the Tiahuanaco period." He says (*Ibid.*, p. 86) of the three rectangular stone enclosures of Huancané that: "These courtyards are bounded by more or less complete rows of upright stones or slabs, all of which appear to have been shaped." In another place (p. 153) he says that like those of Kalasasaya and Mocachi "they are demarcated by upright stones between which there possibly was a stone-filling; detached, square-cut stone blocks are here and there to be seen, etc. The main difference would be that at Wancani the stones are of a considerably smaller size than those of Kalasasaya. Whether every one of the stones at Wancani has been trimmed into shape is uncertain. Hence the Wancani ruins, when compared with those of Kalasasaya, impress one as being poorer and more degenerate: one notes the absence of the ample proportions that characterize Kalasasaya."

Rydén's conclusion is that the religious stone enclosures of Huancané are later decadent imitations of the large Kalasasaya structure of the Early or Classic Tiahuanaco period. This is interesting, as it would illustrate just how much can be expected of those who similarly imitated the colossal Kalasasaya structure on the small Polynesian islands. Unlike the original Kalasasaya of Tiahuanaco, the courts of Huancané are level with the ground or even sunk to a lower level than the ground surface (*Ibid.*, p. 86), wherefore the commonly raised platform foundations of the Polynesian *maraes* have preserved even more of the original concepts of the large Tiahuanaco enclosure than have some of the neighbouring decadent stone enclosures of the Andes.[1]

The stepped platform or truncated pyramid of South America and Polynesia

The great Kalasasaya, or *marae*-shaped stone-enclosure at the Tiahuanaco cult-site, only represents one of the two distinct temple forms raised in that deserted centre, the other being based on entirely different principles. Next to the south wall of Kalasasaya lies the enormous semi-artificial pyramid of Akapana or Hakapana. (Posnansky 1914.) This is a natural hillock artificially reshaped and stone-faced as an enormous stepped pyramid 690 feet square, and 50 feet high. (Steward 1946.) There is reason to believe that it was once even higher. Posnansky measured the top terrace at 32 400 m² or roughly 300 000 square feet. Beautifully squared and dressed stones, which once had been used to convert the hill into a stepped stone-faced pyramid, are now scattered about the sides and top terrace, half buried in earth. There is also evidence that the work of convertion was never quite completed. Yet its mutilated condition to-day is partly due to the large quantity of the beautifully dressed pre-Inca stones which have been removed from the Tiahuanaco constructions by the Aymara Indians and modern settlers, for building their own houses and a church nearby, even for the local railway.

As in the construction of the *marae*-shaped Kalasasaya, so also with Akapana, two distinct types of stone were used: a reddish coloured sandstone and a grey lava. As Bennett

[1] The base of the smaller rectangular enclosure immediately to the east of Kalasasaya in Tiahuanaco also seems to be submerged rather than elevated. Bennett (1934) believes it to be Decadent. This, as stated, has no reflection on the two stone-statues excavated independently within the court, since one of them is dateable as of the Classic period.

(1934, p. 477) shows, it is generally agreed that there were (at least) two phases of Tiahuanaco culture. Most writers follow Posnansky's designation of two periods, based on the stone material and the building technique used. Bennett, however, shows the danger in judging a difference in time periods from a difference in building material. He says of Tiahuanaco: "Sandstone and lava rock are the principal materials used. Some buildings are constructed entirely of sandstone, others entirely of lava, and still others with both stones. . . . In the all-sandstone buildings the megalithic upright technique is employed and in the all-lava buildings the notched and jointed blocks are used. In all probability, the sandstone megalithic style precedes the lava joint-block style, although absolute proof is lacking. Furthermore, there is no evidence of any great chronological or cultural discrepancy between the two styles. On the contrary, the fact that Calasasaya, Acapana, and Puma Punci were started with one material and finished, or continued, with another, without any radical changes in building plan, indicates a rather close connection between the two styles."

Bennett also quotes Means (1931, p. 109), who shows that also the pyramid at Vilcashuaman was probably of Tiahuanaco type and period. He furthermore quotes Tello (1928, p. 272) as to the existence of terraced, truncated pyramids in the Huaraz region of northern Peru, where there are also rectangular and megalithic stone-enclosures in the same style as Kalasasaya at Tiahuanaco. He emphasises (1934, p. 484) that, if building technique were analyzed into such elements as megalithic upright enclosures, stepped pyramids, carved stones, jointed blocks, association of statues with buildings, etc., a great many parallels might be drawn between the Chavín-Huaraz section of northern Peru and Tiahuanaco. Furthermore, he says, some of the adobe structures on the coast may eventually be associated with the Tiahuanaco style. As he points out, stone is more readily available in the highlands; therefore architecture of the Tiahuanaco style is best known up there, whereas lowland people, like the Chimu, resorted to buildings of adobe.

In his study of the "Archaeology of the North Coast of Peru", Bennett (1939, p. 22) shows that besides the two larger adobe pyramids near Moche, several smaller pyramids remain on the coast of north Peru. Kroeber (1930 b, p. 21) points out that both real stone and adobe pyramids were built by the early high-culture people of Mexico and Peru, and he says (1930 a, p. 109) of the Early Chimu culture that it raised terraced, truncated pyramids higher than any erected elsewhere in Peru and used, not stone as in the Andes, but large, flat, sun-dried adobe bricks. He shows that: "Important pyramids occur throughout the area."

Even more magnificent than the Akapana pyramid of Tiahuanaco is the almost equally defaced Pyramid of the Sun near the ancient settlement of Moche on the coastal plains of North Peru. This edifice, built of adobe, consists of a basic platform measuring about 748 by 446 feet with a height of 59 feet[1] and bordered by five terraces. This platform seems to consist of a larger southern and a smaller northern rectangle, and on top of the latter was again set a pyramid about 338 feet square and 75 feet high.[2] Seven terraces or steps form the slope of this superimposed pyramid. Some five hundred yards east of this ecclesiastical structure and on the other side of the ancient settlement lies the so-called Pyramid of the

[1] 228 by 136 m, and 18 m high. (Kroeber 1925.)

[2] 103 m square, 23 m high. (*Ibid.*)

Moon. This consists of six terraces of adobe brick on the three sides clear of the hill, forming a main platform 262 by 197 feet and 69 feet above the plain.[1]

Identifiable Tiahuanaco remains have been found deposited in an artificial cemetery constructed on the platform of the Early Chimu Pyramid of the Sun at Moche. (Kroeber 1925, pp. 199, 208.) Although this in itself does not prove a common origin of the Tiahuanaco and Early Chimu pyramids, it does at least prove the mobility of, and periodical contacts between, local high-cultures. We have earlier seen that bearded Caucasoid effigy jars have been excavated at the very foot of the Pyramid of the Moon, left there by the same early people who erected these two pyramids.

While the stone-faced pyramid of Tiahuanaco and the adobe pyramids of the Early Chimu area represent colossal constructions equalled in no other area of South America, although reappearing, like the monoliths, in Mexico and Yucatan, yet the same conception on a lesser scale seem to have been important in pre-European Peru. Benzoni (1565), whose primitive drawings give much interesting information about life in aboriginal Peru before the all-embracing influence of Christianity, has also illustrated how these aborigines "communicated with the devil" by erecting certain places for religious worship. He shows Peruvian sun-worshippers on what he terms (*Ibid.*, p. 247) "the top of a flight of stone steps made on purpose". The drawing shows natives on the top of a small, stepped and truncated pyramid of the type we are now discussing. (See Plate LIX **5**.)

Since the stepped and truncated pyramid represents an important form of ecclesiastical building in early Peru, and since the largest adobe pyramids of Moche and the large stone-faced earthen pyramid of Tiahuanaco date back to Early Chimu and Tiahuanaco periods, it would seem difficult for pre-Inca voyagers into the Pacific to bring with them only the conceptions of the *marae* form of religious structure, without also reverting, at least on some islands, to the building of some sort of terraced pyramids on a scale compatible with local conditions. It need therefore cause no surprise to observe that the early voyagers like Banks (1896, p. 102), Cook (1768—71, p. 83) and Wilson (1799, p. 207), on landing in early Tahiti, were struck by the discovery of one large and many smaller stepped and truncated pyramids, which we shall find to have been constructed on the basic principles of the pyramids in Mexico and Peru.

The largest of the Tahitian pyramids rested on a low platform nearly three hundred feet from east to west and 267 feet from north to south. The *ahu*, or stepped pyramid, was at the west end of this platform, and measured 367 by 87 feet according to Cook. With an average of more than four feet per step, the total height must have been roughly 45 to 50 feet above the ground. (Banks says 44 feet, Wilson 51 feet.) The bottom step, according to Wilson, was the deepest, being six feet. Today this pyramid, known as Marae Mahaiatea, has almost disappeared and the fragments that remain are overgrown by forest; only a section of the original facing of beautifully dressed stones is preserved. (Emory 1933, p. 72, pl. 5 a.)

In his journal, later published in Hooker's edition, Banks (1896, p. 102) gave the following interesting account: "We afterwards took a walk towards a point on which we had from afar observed trees of *etoa* (*Casuarina equisetifolia*), from whence we judged that there would be some *marai* in the neighbourhood; nor were we disappointed, for we had no

[1] 80 by 60 m and 21 m high. (*Ibid.*)

sooner arrived there than we were struck with the sight of a most enormous pile, certainly the masterpiece of Indian architecture in this island, and so all the inhabitants allowed. Its size and workmanship almost exceed belief. Its form was similar to that of *marais* in general, resembling the roof of a house, not smooth at the sides, but formed into eleven steps, each of these four feet in height, making in all 44 feet; its length was 267 feet, its breadth 71 feet. Every one of these steps was formed of white coral stones, most of them neatly squared and polished; the rest were round pebbles, but these, from their uniformity of size and roundness, seemed to have been worked. [They were.] Some of the coral stones were very large, one I measured was 3 ½ by 2 ½ feet. The foundation was of rock stone, likewise squared; the corner stone measured 4 feet 7 inches by 2 feet 4 inches. The building made part of one side of a spacious area walled in with stone; the size of this, which seemed to be intended for a square, was 118 by 110 paces, and it was entirely paved with flat paving-stones. It is almost beyond belief that Indians could raise so large a structure without the assistance of iron tools to shape their stones or mortar to join them; which last appears almost essential, as most of them are round: but it is done, and almost as firmly as an European workman would have done it, though in some things they seem to have failed. The steps for instance, which range along its greatest length, are not straight, they bend downward in the middle, forming a small segment of a circle. Possibly the ground may have sunk a little under the immense weight of such a great pile; such a sinking, if it took place regularly, would have this effect. The labour of the work is prodigious, the quarried stones are but few, but they must have been brought by hand from some distance; at least we saw no signs of a quarry near it, though I looked carefully about me. The coral must have been fished up from under the water, where indeed it is most plentiful, but usually covered with at least three or four feet of water, and generally with much more. The labour of forming the blocks when obtained must also have been at least as great as that employed in getting them. The natives have not shown us any way by which they could square a stone except by means of another, which must be a most tedious process, and liable to many accidents through tools breaking. The stones are also polished as well and as truly as stones of the kind could be by the best workman in Europe; . . ."[1]

Forster (1778, p. 543) wrote on his early visit to Tahiti: "The inhabitants of Taheitee shew their reverence to their divinities in various manners, first by the appropriation of certain places for religious worship, which they call MARÀI. These places are commonly on points projecting into the sea, or near it, and consist of a very large pile of stones, generally in the shape of an Egyptian pyramid, with large steps; sometimes this pyramid makes one of the sides of an area, walled in with square stones and paved with flat stones."

Emory (1933, pp. 5, 28) shows in his survey of *Stone Remains in the Society Islands* that, in the Windward Islands (Tahiti, Moorea, Meetia), the shaping as well as the fitting of stone attained a degree of excellence matched in Polynesia only by some of the finest

[1] If it is correct, as has recently been argued, that this particular marae was built shortly before Banks' visit, then one should at least be inclined to wonder if the stones were also shaped in this recent period, or were part of some former ruin that was reconstructed. None would propose that the stepped pyramid, as a religious structure for Tahitian gods, was introduced in European times. Even on a tiny isolated volcanic island speck like Meetia, 60 miles east of Tahiti, the Spaniards in 1772 found a corresponding marae with a stone platform "raised step above step". (Emory 1933, p. 111.)

examples of workmanship in Raivaevae of the Tubuai group, in Tonga, in the Marquesas, and in Easter Island. A characteristic structure in the coastal areas is the stepped, truncated pyramid, or stepped platform, raised at one end of a stone enclosure. Thirty-one such ruins were examined in Tahiti, and fifteen in Moorea.

Second in size to the largest pyramid of Tahiti (Mahaiatea), was one in Moorea (Nuurua), which was 198 feet long, 40 feet wide and in its ruined condition 20 feet high, with probably six or seven superimposed platforms or steps. Most pyramids consisted of four outer steps (three on the pavement side), and measured on the average 60 by 15 feet with a height of 10 to 12 feet.

Also Linton (1923, p. 457) had pointed out that the sacred structures of the Society Islands were "stone enclosures with pyramid at one end." Some of the stepped North Peruvian pyramids can still be seen to have been located at one end of a great stone enclosure. (See Steward 1946, Pl. 52.) In their plan of Tiahuanaco Stübel and Uhle (1892) show the ruins of tremendous stone walls that once enclosed the great Akapana pyramid. As shown by Emory (1933, p. 73), in Wilson's early drawing of the Tahitian pyramid (Plate LIX **3**) the wooden fence has been put in by the engraver, and the stone wall that actually enclosed the court is omitted.

We have already seen that Cook, a decade after his first visit to Tahiti, discovered Hawaii and was led inland by the high priest, who took him for a returning ancestorgod, and thus escorted him up to the early temple of this god. This construction also was a truncated stone pyramid or elevated platform about forty yards long, twenty broad, and fourteen yards in height. The top platform was flat and well paved, and formed the foundation for a small wooden temple. (Cook 1784, Vol. III, p. 5.)

The Hawaiian group contains the ruins of a number of elevated, and often stepped, stone platforms and semi-pyramids resting against hillsides and mountain ridges in the form and fashion often seen in North Peru. Most of them date back to the early era in Hawaii and are associated with Menehune beliefs and traditions. (McAllister 1933; etc.) In his *Archaeology of Oahu* McAllister (*Ibid.*, p. 10) says that among the remaining temples (*heiaus*) in this Hawaiian island "the terraced heiaus or those in which terracing predominates are the most common and impressive." In the Heiau Ukanipo in Oahu the appearance of the construction is described by the same author (*Ibid.*, p. 124) as elaborate and impressive, with four superimposed steps standing out prominently on the three sides clear of the hill, in the same manner as above described from the Pyramid of the Moon at Moche. Many other Hawaiian temples of war, as described and sketched by McAllister, would hardly have caused surprise if encountered in the hills of North Peru.[1]

Allen (1884, p. 251) describes one of the ancient religious structures of Hawaii as "a vast enclosure, of which the stone walls are 20 feet thick, at the base, and 15 feet high; an oblong square, 1 040 feet one way, and a fraction under 700 feet the other. Within this enclosure in early times had been three temples [pyramidal platforms], each 210 feet long by 100 feet wide, and 13 feet high. . . . The blocks are of all manner of shapes and sizes;

[1] Although several of the earlier 'Menehune' *heiaus* were left for destruction, others were apparently maintained by the newcomers to Hawaii, and various types of *heiaus* continued to be built. According to McAllister (*Ibid.*, p. 11), models were made of sand before the local *heiaus* were built. The Peruvians made similar models in clay, and occasionally in stone. (Rowe 1946, p. 224.)

but are fixed together with the neatest exactness. The gradual narrowing of the wall from the base upwards is accurately preserved." To this he adds in a footnote: "This curious style of building is frequently met with in Peru..."

Facing South America in the open water-span between Hawaii and the Marquesas lies lonely Malden Island. Byron (1826, pp. 204, 205) wrote about its discovery in 1825: "We had left the Sandwich Islands with the hopes of visiting Otaheite, or more properly Tahiti; but after ten days' vain attempts to get to windward, we altered our course and gave up our design. We were in some measure consoled for this disappointment, however, when, on the morning of the 29th of July, we unexpectedly saw broken water and low land at a distance, ... We steered for it immediately; and about noon hove-to abreast of it. Mr. Malden and some others immediately went in a boat to examine it. It appeared to be a low coral formation, about twelve or fourteen miles in extent..." Mentioning the local birds, Byron continues: "These, with a small field-rat, a coppercoloured lizard, and a dragon-fly, were the only inhabitants we found on the Island. Yet there are traces of human occupation, if not of habitation. Large square areas raised to the height of three feet above the ordinary surface are here and there to be seen, supported by blocks of wrought coral, and each having in the centre what we may call an altar or table-tomb. Captain Cook has mentioned similar edifices, if they may be called so, in some other uninhabited islands; and they are not very dissimilar in form to places of worship found among the aborigines of South America. We named this island Malden's Island, in honour of the surveying officer... There is fresh water in it."

The South American places of worship recalled in these prehistoric Polynesian ruins were the stepped pyramidal platforms, as may be seen from Dampier's illustration to Byron's text. (See Plate LIX **7**.)

J. M. Brown (1924, p. 3) drew attention to these religious structures on Malden and compared them with the stepped pyramids in other parts of Polynesia, and those of Peru and Mexico to the east, but reduced the value of his argument by resorting to unfortunate speculations on geological disturbancies. Emory (1934 b), however, shows the complete lack of support for Brown's theory that surrounding fertile land has been submerged, and he claims that the size of the Malden constructions is less impressive than may appear from Dampier's drawing. He is inclined to believe that the prehistoric builders of the Malden structures had come from Raivaevae island, some 1 300 miles to the south-southeast.

Some of the best known Polynesian pyramids are found among those built as tombs for the ancient priest-kings or Tui-Tongas of the Tongan group. McKern (1929, p. 8), in his *Archaeology of Tonga*, divides the structural forms of these elevated tombs into "mounds" and "platforms", according to the steepness of their sides. About the former he says: "Although no Tongan mounds are constructed entirely of stone, many mounds of earth have sides faced with stone retaining walls."

Some of the best local stone work, however, is found among the rectangular stepped Tongan platforms or pyramids. About these the same author writes (*Ibid.*): "The rectangular type includes single platforms and storied platforms, or stepped pyramids. All platforms ... are earth filled enclosures retained by walls of upright slabs in contact at adjoining edges. In some of the smaller structures, the slabs are natural flat pieces roughly broken about the edges and but indifferently fitted together. In most structures, however,

the stones of the retaining walls are dressed and sized, producing a smooth, unbroken wall of continuously even height, and fairly even thickness."

The most distinguishable type of *langi* built for the former priest-kings of the Tonga islands consists, according to McKern (*Ibid.*, p. 33), of stepped pyramids composed of "from one to five rectangular platforms, each retained by perpendicular stone walls. Where a plurality of platforms occurs, the smaller are mounted upon the larger in regular succession, according to corresponding differences in lateral dimensions, to form stepped pyramidal structures. Many of these are of imposing size."

The five-stepped pyramid of Katoa, in Mua, Tongatabu, has a base 140 feet long and 120 feet wide, and the largest of the dressed stones of which the vertical sides of the steps are fashioned is 14 feet long, 2 feet thick, and stands just about 6 feet above ground. (*Ibid.*, p. 39.) The neighbouring pyramid of Leka has a base 166 feet long and 140 feet wide, with each of the four steps roughly about a yard deep and a yard wide. All the stones in the walls are comparatively large. One of the carefully dressed stones in the top tier wall is 23.8 feet long, 4.8 feet high and 1.3 feet thick; one in the bottom tier is 24.7 feet long, 3.7 feet high and 1.7 feet thick. "All stones are exceptionally well surfaced and smoothly joined end to end. The corner stones overlap without regard to order." (*Ibid.*, p. 40.)[1]

As shown by McKern, the art of dressed stone construction and the architecture of the *langi* was not in the process of developing when Europeans first arrived, but showed sign of retrogression, as nothing of importance had been contributed by the last generations of Tongan monarchs. Although subsequent Tui-Tongas had kept up the custom of building *langis* for themselves, local tradition assigned some of the best and most highly developed specimens to Tui Tatui, who is one of the earliest progenitors of the Tongan kings, ruling thirty-four generations before 1893, and thus before the great Maori-Polynesian spread from Hawaiki. McKern (*Ibid.*, p. 121) says: "The abrupt, initial occurrence of stone masonry, in a highly developed stage, during the reign of Tui Tatui, as indicated by native tradition, suggests an introduction at that time of the art into Tonga from some outside source; . . ." Failing to find in Samoa anything similar to the langi of the Tonga Islands, McKern turns his attention to Fiji, saying: "The burial mound, as it occurs in Tonga, is not a characteristic feature of Samoa. In Fiji it occurs as a common form of burial place. The mound appears to have been the prototype from which the platform and pyramid tombs were developed."

But Fiji had no stone-shaping art. If we instead turn our attention eastwards we find more striking analogies to the dressed and stepped pyramids of Tonga than the primitive Fijian burial mound. The more elaborate of these rectangular and stepped Tongan *langis*

[1] A single carved stone in another nearby one-step langi is 24.6 feet long, 7.6 feet high, and 2 feet thick narrowing to 1 foot along its top edge. (*Ibid.*, p. 55.) Concerning the three-stepped pyramid of Paepaeotelea in the same cluster of pyramids, McKern (*Ibid.*, p. 52) says: "The individual stones in the lower tier are 8 to 18 feet in length, excepting the L-shaped cornerstone of the southeast corner, which measures 21.3 feet along the eastern side and 6.1 feet along the southern. The northeast cornerstone, also L-shaped, measures 14 feet along the northernmost side and 6 feet along the easternmost." These L-shaped corner-stones recall a feature mentioned above in the lonely outposts of eastern Polynesia, and of the stone-shaping art on the ruined site of Tiahuanaco. (For some of the most elaborate forms of cut stones in Tiahuanaco, see Inwards 1884, Pl. 12–15.)

appear to be built in the same style as the main pyramidal structures in Tahiti, and even more on the principles of the stone-faced earthen pyramid of Akapana in Tiahuanaco.

Speaking of the elements of the early Tongan culture now irrevocably lost to the ethnologist, McKern (*Ibid.*, p. 120) shows by archaeological investigation that the early Tongans were masters in great-stone quarrying and transportation. He even refers to "the occurrence of quarry sites on islands far removed from any building sites, supporting the tradition of the transportation by boat of large stones over considerable water distances; ..." His conclusion is: "The great stone structures of Tonga definitely reflect the strongly centralized socio-political organization of its primitive inhabitants. The existence of a king, holding unlimited sway over a united Tonga, was an historical fact at the time of the discovery of the archipelago by Europeans, and the long rule of a single dynasty of monarchs is clearly pictured in its earlier prime by native tradition. ... The building of the truly colossal stone structures which occur so numerously in the little kingdom involved a tremendous amount of labor, no small degree of skill, and a considerable expenditure of time. Long years of training, well organized effort, and absolute control of labor under a directing head were essential factors necessary to enable the successful construction of one of the larger langis."

An important detail of some of the Tongan pyramids is that they were occasionally ascended by ramps or stairways. McKern (*Ibid.*, p. 8) says: "The tops of some mounds and platforms were made accessible by roadways, or approaches, ascending gradually from the surrounding land—the length of the roadway being determined by the height of the structure. Most of these approaches were supported on either side by retaining walls, similar to the walls of the main structure. A few were paved with stone slabs or rough fragments of stone, or surfaced with gravel. Access to certain platforms was by means of low stone steps placed at certain points against the retaining walls. Where the low steps adjoin relatively high walls, they seem merely to have marked the proper place for mounting rather than to have afforded help in ascending the structure."

To the top of the five-stepped pyramid of Katoa two stair-like ramps ascend, evenly placed exactly opposite each other in the centre of the east and west side of the pyramid respectively. (*Ibid.*, p. 39, Pl. 2 A.) On the almost even-sided langi of Olovehi at Lifuka Island a ramp is constructed only on one side, leading to the upper platform in the form of stone steps. This feature also is strikingly reminiscent of so many of the pyramidal structures of early Mexico and Peru. Leicht (1944, p. 204) describes the three-stepped pyramid near Etén in North Peru, which has a base of roughly 300 by 200 feet and is ascended by a continuous stairway to the top platform. The author claims that this feature of early architecture on the coast of North Peru clearly demonstrates the cultural relationship with Central America. Kroeber also (1930 a, p. 109) points out that certain of the larger stepped pyramids of the Early Chimu period "were sometimes approached by ramps."

It is noteworthy that the North Peruvians of the Late Chimu period, while modifying the architecture of the larger terraced pyramids of the classic Early Chimu period, attained results very similar to those occasionally found in Tonga. Kroeber (*Ibid.*) says: "Pyramids in this Late era no longer attained the height of the largest Early Chimu ones. Their broad tops, probably their interiors also, served as cemeteries. Often the whole structure seems

little else than an elevated platform for burials. The sides were steep; terraces, if present narrow; ramp approaches, frequent, and sidling as well as direct. Clusters of pyramids were more usual than in the Early period."

The fundamental idea of a step-shaped and elevated stone-platform as a religious structure has a wider distribution in Polynesia than the *marae* or rectangular upright enclosure described earlier. It is probably to be seen in a modified form in the *ahu* of Easter Island and the *pae-pae* of the Marquesas group. Buck (1938 b) and Emory (1939) describe it as having three or occasionally four steps respectively in Mangareva and Timoe to the far east; and, although both the *marae* and cut-stone work are absent from Samoa to the west, the Samoan *tia* is a rectangular cairn consisting of up to three step-formed tiers of natural boulders raised over the grave of a high chief. (Buck 1930, pp. 322, 691.)

From the time when Lang (1834, pp. 101, 103) pointed out that the South Americans and Polynesians built no roofed temples, but solid mounds with steps, the concurrence of the pyramids and pyramidal platforms of these two geographically adjacent areas have with brief intervals been pointed out. The opposition among some of the Polynesianists, however, has regarded this correspondence as a superficial similarity, claiming the size as well as the purpose of the pyramids to be entirely different in the two areas. Their objection may be based partly on inadequate information regarding the pyramids of *Peru*, for the great dimensions of Akapana and the Pyramids of the Sun and the Moon should be judged against the background of a numerous mainland population, and even so they do not represent the average of stepped pyramidal edifices in Peru. The larger stepped pyramids of Tahiti, Tonga, and the related form in Hawaii, are in magnitude, conception, and working method well within the limits of the average comparable structures of early Mexico and Peru.

One can also occasionally hear the argument that the Polynesian pyramids were erected to serve for worship, while those of Peru were intended merely as tombs. I have also heard this argument exactly reversed. But it is hardly possible to find foundation for such a distinction, since the natives in the two areas apparently saw no grounds for separating one of these purposes from the other. We have seen with Benzoni how stepped pyramids were built for the purpose of worship in aboriginal Peru, a custom familiar also in early Mexico, where a small temple was commonly raised on the upper terrace. Yet we have seen with Kroeber how early Peruvian burials were often made in the very same type of ecclesiastic building, some of the pyramids being expressly raised to serve as cemeteries or burial platforms. As in early America, so also in Polynesia, the pyramids seem to have served either purpose, or occasionally both purposes at the same time. This was first pointed out by Byron (1826, p. 25) more than a century ago, when he wrote upon his visit to Hawaii: "The morais were both temples and repositories for the dead. Garcilasso de la Vega, in his Conquest of Florida, mentions that the temples were repositories for the dead, and also treasuries for the reception of the more costly goods of the Indians."

We saw how in Hawaii Cook was led straight to the top of a pyramid where there was erected a little wooden house for worship. Yet there is evidence to indicate that some Hawaiian stepped pyramids were used as restingplaces for dead chiefs until the high priest was "informed by the gods" that he must remove them to their final resting-place in some designated cave. (McAllister 1933, p. 124.)

The Society Islands' pyramids were temples of worship, occasionally, as Cook observed, with effigies on the top platform. Yet Forster (1777, Vol. I, p. 267) says of at least one of these pyramids that: "This the native said was a burying-place and place of worship, Marai, . . ."

In Tonga, as McKern (1929, p. 33) shows, all the stepped and truncated pyramids were raised as tombs for important members of the Tui-Tonga family, and: "One or more stone vaults, entered from the flat top of the structure, are present in most langis, but there are exceptions to this rule." He also shows how Cook speaks of wooden effigies erected on top of a *langi* he saw at Mua, Tongatabu. Furthermore, he describes small huts, occasionally of stone, that stood on top of some of the pyramids. According to d'Urville, who visited these pyramids a hundred years earlier, these huts were places for prayer—or spirit-houses. (See Plate LIX **6**.)

From Mangareva Emory (1939) speaks of terraced platforms with three steps, the largest having been used for burials in small vaults on the top. Yet they served as temples also. A large sacred *pae-pae* inspected by the present author in the Marquesas group (Hanavave) and formerly used for religious worship had an entrance from the top of the platform into a stone-lined burial vault. According to the early travellers the *ahus* of Easter Island seemed at the time of discovery to serve a combined purpose of worship and burial. Vaults were found in some of them.

Since the hierarchy and chiefly families in Peru and parts of Polynesia were considered more than human, and since the worship of royal ancestors was so pronounced, we may well understand why there is so close a connection between the temple of ancestor worship and the tomb of the kings in both areas. The functions of the South American pyramids are directly repeated in Polynesia.[1]

Cyclopean stone gateway as religious structure

There is one more megalithic construction in Polynesia of a type not yet dealt with; the cyclopean gateway of Tongatabu. Raised as a large trilithon, it was not part of a temple, nor the entrance through any wall or other construction, but stood alone, in all likelihood a monument at which religious rites were practised. (Plate LXI **2**.)

McKern (1929, p. 63) gives the following dimensions to the three stones of which the gateway is made: the western upright is 17 feet high, 14 feet wide at the base and 12 feet at the top, with an average thickness of 4.5 feet. The eastern upright is 15.5 feet high, 13.5 feet wide at the base and 11.3 feet at the top, with an average thickness of 4.5 feet. The lintel is 19 feet long, 4.5 feet wide, and 2 feet thick. An interval of 12.5 feet separates the

[1] Posnansky (1913) has analysed the constantly reappearing stairway-sign or step-symbol in Tiahuanaco art, as expressed also in local ecclesiastic architecture like the cyclopean stairway and the Akapana pyramid. He shows the symbol to be that of the heavens in relation to earth. If this be correct it is interesting to note that the Tongan term for their stepped pyramids is *langi*, which is the general Polynesian term for "heaven". It may be true, as some writers suggest, that certain of the stepped megalithic terraces and hill-side platforms which abound in Peru and Polynesia, when occasionally constructed as a religious structure rather than for agricultural purposes, may represent an evolution from the stepped pyramid under hilly and mountainous conditions. Some of these superposed terraces, like those covering mountain summits of Rapa-iti island, contain single stones eight feet long and six feet high. (Churchill 1912.)

uprights. It has been estimated that the visible portions of the two uprights weigh each between 30 and 40 tons. We have seen (p. 369) how the uprights were raised on end and the lofty lintel piece brought above the ground by means of temporary earthen ramps. A large irregular pile of earth nearby may indicate where the material for the ramp was dumped after its removal from the gateway.

As stated by McKern (1929, p. 63): "The archway faces north and south, the lintel-piece extending almost due east-west." Some writers have therefore suggested that the gateway might have been constructed as a sort of a sun-measurer. One would, however, think that a simpler device could have sufficed for that purpose, and it would be more reasonable to consider the enormous construction as an ecclesiastic structure probably associated with sun rites. Native tradition, according to the same author, take the origin of the trilithon back to the early period of Tui Tatui, the originator of the pyramids and great-stone construction on Tonga. As to the purpose of the monument, traditions and native beliefs are very vague; some believe the uprights to have been carved to represent Tui Tatui's two sons, and the lintel-piece to unite them and to prevent through sympathetic magic the breaking of their brotherly relations.[1] Others consider the construction to have been the carrying-yoke of the island discoverer Maui, as the native name for the monument is Haamongaamaui. Some modern natives have even suggested that the gateway might have been used for a game. We are left with the impression that we are dealing with a prehistoric monument from the early island era, the purpose of which is no longer known to the present islanders, even if their royal family claim descent from the early island hierarchy that had the gateway built in the dim past.

As shown by St. Johnston (1921, p. 244), the curiously isolated gateway of Tongatabu has roused much controversy in the Pacific, as nothing quite comparable has been discovered anywhere in Oceania. Writers with little regard for geography and voyaging possibilities have gone back westwards right through the Old World as far as Stonehenge in England to find a comparable construction. Stonehenge, however, quite apart from its location on the Atlantic side, is in its essentials a large circular temple enclosure, whereas the gateway of Tongatabu is a single monument completed in itself as a megalithic portal.

Since the Tongan gateway was constructed by the same immigrant hierarchy that introduced the idea of building stepped and stone-faced earthen pyramids in Tongatabu, we may again feel free to look to the New World for evidence. Perhaps the best known single piece of stone work in aboriginal America is the megalithic "Gateway of the Sun" at Tiahuanaco. Carved from one colossal piece of stone, this tremendous portal is not part of any wall or adjoining construction, but is complete in itself as an independent religious shrine.

When occasionally a comparison has been drawn between this stupendous pre-Inca stone gateway and the one on Polynesian territory, the idea of a basic relationship has been rejected because the former is cut as a colossal single piece, while the other is composed of three separate slabs morticed to give the same general appearance. If this implies that the morticing used in Polynesia was alien to the stone workers of the Tiahuanaco site, there is no support for the argument, as morticing was highly developed in the Tiahuanaco stone-shaping art; and if it implies that there is a basic difference in concept behind a mono-

[1] Compare the myth of the early brotherhood and fratricide of early Tonga. (Part IV.)

lithic and trilithic gateway, this too must be rejected, since Stübel and Uhle (1892, p. 26), in their excellent survey of Tiahuanaco, have described no less than ten monumental gateways raised within this megalithic site, some cut as large coherent monoliths while others were composed of two uprights supporting a third megalith in the form of a horizontal lintel, like that at Tongatabu. The parallel existence of monolithic and trilithic gateways at Tiahuanaco shows that the two forms represent alternatives in working-methods rather than a difference in concept and purpose. Practical considerations would make it seem almost impossible, or at least extremely difficult, to make a gateway like that at Tongatabu from one coherent piece of stone. The famous monolithic Gateway of the Sun at Tiahuanaco is a little over 7 feet high, 13 ½ feet wide, and 1 ½ feet thick, yet the large block from which it was cut would be very much smaller than each separate upright in the colossal Tongatabu gateway.

The Gateway of the Sun is beautifully ornamented with surface designs in low relief, but most of the other local gateways have no such surface decoration. The coarse structure of the limestone slabs used in the Tongan gateway would permit no fine surface carving. But a noticeable feature of this portal is the cavity on the upper lintel section, which is commonly thought to have served for offerings. This is another interesting analogy to the Gateway of the Sun, which has several deep niches formed on the posterior side, four of which are in a row on the upper section, and are similarly believed to have served for offerings.

The solar figure carved on the central front section has given the large Tiahuanaco gateway its name, and although the monument itself is no longer *in situ*, the stone enclosure inside which it stands (Kalasasaya) and the Akapana pyramid are both astronomically oriented, like the Gateway of Tongatabu, and we may well assume that the same has been the case with the "Gateway of the Sun". It may be interesting to notice a remark by Wallace as quoted by Enock (1912, p. 262): "... in the drawing of the large gateway in Bolivia [Tiahuanaco] there are figures whose features resemble the very peculiar features of the Easter Island monuments, and have a very curious Caucasian aspect."

Having thus briefly analysed the various characteristics of Polynesian and Peruvian megalithic art, it is tempting to agree with J. M. Brown (1924, p. 269) in the following part of his conclusions: "... the likeness of the cyclopean structures of the two areas is sufficiently apparent. Every feature of Polynesian great-stone work is repeated in the great-stone work of the Andes."

Roads and paved ways

There is one element in Polynesia which seems so closely associated with the early megalithic structures that it can hardly be considered separately. We refer to the paved ways and roads so surprisingly widespread in these tiny islands. The construction of roads and pathways is perhaps in itself not such a remarkable culture trait as to indicate diffusion one way or another, and the subject is included here not by way of argument, but to test whether or not these roads and paths might have followed the megalithic monuments and buildings down with the winds from America. Their occurrence in scattered parts of Polynesia, among fishermen and mariners who knew no form of wheel nor any form of land travel other than on foot, is at least a notable observation.

On Easter Island Routledge (1919, p. 194) discovered remnants of a prehistoric road nearly seven miles long and from nine to ten feet wide. It was traceable from the foot of Rano-Raraku, where the image quarry was, almost to the top-knot quarry at Rano Kao. The embankments of the early road were found to be still often two feet above the ground, and the cuttings three feet deep. Several other roads branch in various directions from the image mountain, and on this tiny island Routledge shows nearly twenty miles of intersecting roadways. Rano-Raraku, she says, was formerly "approached by at least three magnificent avenues, on each of which the pilgrim was greeted at intervals by a stone giant guarding the way to the sacred mountain."

Writers with more imagination than insight into local geology have suggested that the Easter Island roads might once have continued below what is to-day the ocean surface. Actually, the few roads that reach as far as to the sea terminate there in a deep ledge-shaped landing-place. Even Brown (1924, p. 69) observed this fact, which seems rather incompatible with his speculations on submergences: "There are paved ways or slides down to the sea close to several of the great platforms, . . . it is so broad and the stones so carefully fitted and at the foot of it the tide so deep, that there would be no difficulty in hauling up even a double canoe. Or if rafts were used, like in Mangarewa, for transporting the great beams to the island, their unloading would be accomplished without difficulty."

Again Routledge (1919, p. 198) says: "Besides the ceremonial roads and their continuations, there are traces of an altogether different track which is said to run round the whole seaboard of the island. It is considered to be supernatural work, and is known as Ara Mahiva, 'ara' meaning road and 'Mahiva' being the name of the spirit or deity who made it. On the southern side it has been obliterated in making the present track—it was there termed the 'path for carrying fish'; but on the northern and western coasts, where for much of the way it runs to the top of high cliffs, such a use is out of the question. It can be frequently seen there as a long persistent furrow, and where its course has been interrupted by erosion, no fresh track has been made further inland; it terminates suddenly on the broken edge, and resumes its course on the other side. . . . This silent witness to a forgotten past is one of the most mysterious and impressive things on the island."

It is perhaps not unlikely that sections of these roads to som extent facilitated the transportation of the statues and great stones over the rugged island surface. It is noteworthy that Thomson (1889, p. 519), long before Routledge's discoveries, heard the following recital from one of the native Easter Islanders: "When the island was first created and became known to our forefathers, the land was crossed with roads beautifully paved with flat stones. The stones were laid close together so artistically that no rough edges were exposed."

Emory (1939, p. 16) shows that in the Mangareva group west of Easter Island there are also remains of prehistoric roads connecting one bay with another. These are paved in certain areas with "flat-topped basalt stones, with an occasional one of coral or limestone, fitted closely together over a width of from 3 to 6 feet." The same author (1934 b, p. 40) shows that on both Raivaevae and the lonely uninhabited Malden, paved roads lead to the sea from most of the *maraes*. A good example of this strange island engineering is also seen in the beautifully paved approach to the Marae of Tongaroa on Rarotonga.

McAllister (1933, p. 34) says regarding Hawaii: "The Hawaiians had in some places paved trails which consisted of large flat stones placed end to end. Broader trails were

apparently made in well-populated districts." He shows (*Ibid.*, p. 186) that the paved way leading to the ruins of the 140 feet wide and 30 feet high temple platform of Ulupo, Oahu, is called by the natives the "Menehune pathway".

We have seen with McKern how short paved ways also approach some of the Tongan pyramids, and the same author says (1929, p. 89): "Not least among the structural peculiarities of Tonga are the sunken roads. . . . Two of these peculiar highways were examined. Halamate (*hala*, road; *mate*, dead), probably a recent appellative, extends lengthwise from end to end of the island of Ualeva, Haapai, a distance of several miles. It has the appearance of a square-bottomed ditch with the removed earth banked on either side. Its dimensions are 2 to 3 feet in depth, 6 feet in width at the bottom and 12 feet across the top from bank to bank. The course, as marked by a heavy growth of shrubbery along the bottom and sides of the road, follows a consistently straight direction. The other road ascends the western slope of the hill Kafoa on the island of Vavau. It rises straight from the Pangaliki shore to the ridge top just below the hill. The floor of this square-bottomed excavation is about 3 feet wide and is 6 feet below the tops of the lateral embankments. The embankments stand at an angle of about 45°."

Buck (1930, p. 323) describes prehistoric roads on Savaii and Upolu, in the Samoan group, some of which are said to have been made under an early Tongan rule, whereas others have a purely mythical origin.

In the Marquesas group and other Polynesian islands also we find isolated occurrences of artificial roads and paved ways, some of which might well have served pedestrian traffic, whereas others can only be explained as religious constructions intended solely for ceremonial purposes.

It is unlikely that seafarers invented paved road engineering independently on all these scattered islands, and it would clearly be much more natural if the islanders had merely continued a custom brought from a nearby continental empire. It is well known that road construction was a widespread and important feature of the American high-cultures from Mexico in the north and right down to the Andean regions of north-western South America. Bennett (in Steward 1949, p. 54) says:

"In the Northern Andes short stone-paved roads are found in the Tairona villages of Santa Marta, Colombia, . . . In the Central Andes, the *Inca* were famed for their roads. It is highly probable that roads were built in much earlier periods, but archaeological confirmation of this is lacking. The *Inca*, however, maintained a network of roads which covered the four principal divisions of their Empire.

"The Chinchaysuyu system extended north through the mountains from Cuzco to Vilcas, Huánuco Viejo, Cajamarca, Quito, and Huaca. A side branch went to Pachacamac and from there up the Coast of Perú to Tumbes in the north. The Collasuyu system went south from Cuzco, passing Lake Titicaca and Lake Poopó in Bolivia, then inland to Chuquisaca, Santiago del Estero, La Rioja, and Mendoza in Northwest Argentina, and then westward to the coast of Chile. A branch line ran to Arequipa and from there south to Calama, Copiapó, and the Río Maule in Chile. The Cuntisuyu system connected Cuzco and the Nazca region on the South Coast of Perú, and the Antisuyu system extended east of Cuzco into the Amazon drainage. These roads were used by the army, by travellers, by llama transport herds, and by the famous relay messenger runners. In the mountains, they were

narrow, about 3 feet in width, and either stone-paved or lined with walls. On the Coast, the roads were as much as 12 or 15 feet in width, and lined with walls. Across desert stretches, posts were set at intervals to mark the course of the road." (See also Mostny 1949, p. 178.) An interesting illustration of a Tairona paved road in the northern Andes is reproduced by Mason (1931, Pl. 17).

We have seen that some at least of these roads are referred to in Inca traditions dealing with the time when the Viracochas inhabited the Tiahuanaco site, and we have also seen that prehistoric road-construction in Colombia as well as in Mexico was attributed to the white and bearded Bochica and Quetzalcoatl respectively. (Part V.)

Thompson (1928, p. 181), describing the paved prehistoric roads found among the wheel-less aborigines of Yucatan, writes: "They are indeed a striking monument to the immense patience, engineering skill, and industry of the Maya people." They were, he shows, up to 60 feet wide, paved and raised a foot or so, although in swampy land they might be raised as much as eight feet. Some of them were many miles long, linking ruined sites and cities, and the author suggests that they were made for ceremonial use.

Stone towers and subterranean chambers

Of less importance are the cylindrical towers of irregular stones, with square entrances, found on some of the cliffs of Easter Island. (Routledge 1919.) Many theories as to their origin and purpose have been advanced by visitors, the theories ranging from sacred dwellings to watch-towers for turtle-hunters. Quite similar cylindrical stone towers with low square entrances are very common in the Titicaca basin, where some of the early explorers found they had been used for burials. (Gutiérrez 1935; Tschopik 1946.)

In the same connection may be mentioned the most peculiar subterranean galleries on Easter Island, which recur in a strikingly similar form in the hills around Tiahuanaco. Here, precisely as on Easter Island, they are often built as a circular chamber under the surface, lined with stones and covered by large flat slabs and earth. In both areas access is obtained through a narrow, stone-lined opening about eighteen inches square; paintings are occasionally found on the interior walls. (Routledge 1919; McMillin 1927.)[1]

We may also note that the stone-lined prehistoric burial vaults found by Routledge (1919, p. 275) on Easter Island, like those of the chiefly mounds and pyramids in Tonga (McKern 1929, p. 32), and those found in stone platforms on the Marquesas (Heyerdahl 1938), Hawaii (Linton 1923, p. 456), Mangareva (Emory 1939), and perhaps a few other islands, all find their counterparts in the stone-lined burial vaults common enough in early Peru; whereas we have seen (Part II) that the main bulk of historically known Maori-Polynesians followed the burial customs adhered to on the Northwest American coast.[2]

[1] I have seen the same type of circular, subterranean chamber, with narrow, square entrance in the roof and with mural paintings on the adobe walls, in an old native *Kiwa* near Bernalillo in New Mexico. This place, like the subterranean *Kiwas* still in use by Indians in this locality, was built as a sacred place where the men gathered to sing and perform religious ceremonies.

[2] McKern (*Ibid.*) quotes Guttenbeil regarding a prehistoric Tongan burial vault on Niuatoputapu island which had a flat and smoothly dressed stone lid 15 feet long and 10 feet wide. It was so heavy that all attempts to move it

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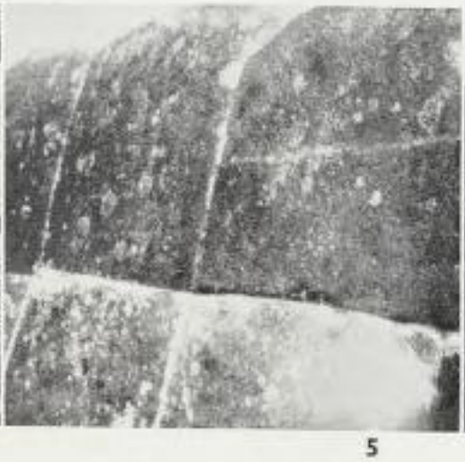

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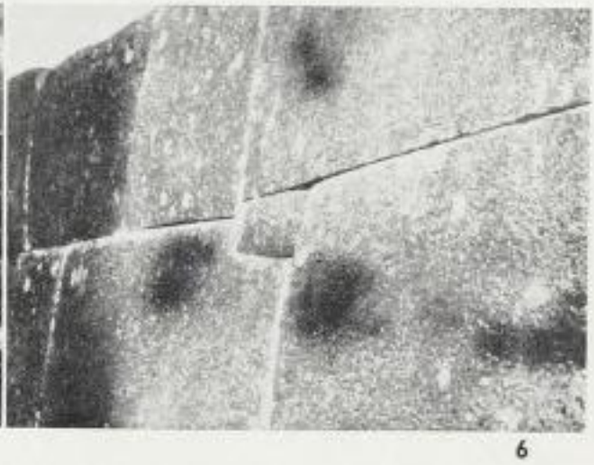

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Prehistoric cut-stone masonry of South America and East Polynesia. **1** Sacsahuaman, Peru. (Photo: *H. Ubbelohde-Doering.*) **2** Easter Island. (From *Lavachery 1935.*) **3, 5, 6** sections of walls at Vinapu, Easter Island. (From *Brown 1924*; *Routledge 1919.*) **4** Cuzco, Peru.

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Stepped pyramidal platforms as religious structures in America and Polynesia. **1** Totonac temple near Vera Cruz, Mexico. (From *Fewkes 1904*). **2** Early Chimu temple and burial place, the "Pyramid of the Sun", Pacific North Peru. (From *Kroeber 1925*.) **3** Temple and burial place at Papara, Tahiti. (From *Wilson 1799*.) **4** Ruins of *Puipui*, stone-lined pyramid at Tongatabu Island. (From *McKern 1927*.)

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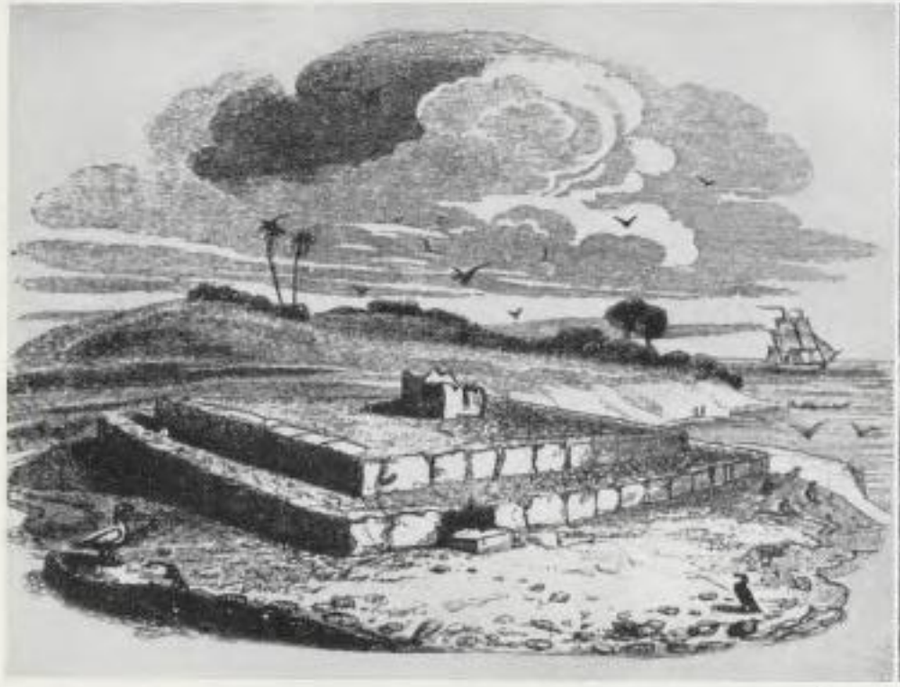

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Before the arrival of Europeans stepped pyramidal platforms served as temples for worship as well as burial places for chiefs both in Peru and Polynesia. **5** Ecclesiastical architecture in aboriginal Peru. (From *Benzoni 1565.*) **6** A tomb for priest-kings in the Tonga group. (From *Wilson 1799.*) **7** Low pyramidal platform on uninhabited Malden Island. (From *Byron 1826.*) **8** Cyclopean cut-stones of Tongatabu royal tomb. (From *Brown 1924.*)

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Uprights marking **1** the Andean temple enclosure Kalasasaya, at Tiahuanaco (photo: *Toucan Press-Wegesch*), and **2** a marae or temple enclosure in Tongareva, Polynesia (photo: *B. P. Bishop Museum*). This, and the stepped pyramid, are the two basic forms of temple construction in aboriginal Peru and Polynesia.

The tongan pottery fragments

We have seen (Part II) how the manufacture of pottery was totally absent from all Polynesian communities when Europeans arrived, in spite of the existence of clay in most of the principal groups, and in spite of the very recent arrival of the Maori-Polynesian immigrants. We have also seen that this most remarkable fact can only be explained by bringing the present occupants of Polynesia down from the Northwest American territory, where the entire coastal population remained ignorant of the use of pottery until it was introduced by Europeans, whereas it was common to all other important culture centres of the Pacific coasts with the exception of the southern extremity of South America. This migration route alone will explain why food was baked in earth ovens throughout historic Polynesia, while ceramic art was absent.

But the question remains whether the earlier megalithic island culture had been equally neglectful of this ancient and almost universal culture trait. We know that if the earlier people had made pots to boil their food in water, this would not have appealed to the taste of the invading Maori-Polynesians, for the occupants of the islands even in our day continue to bake their food in the Northwest Indian Polynesian earth ovens, disregarding European methods. They use calabash or other containers to carry their water. The Polynesians were desperately eager to acquire bits of iron and sharp metal tools when such articles were first brought to their attention by Europeans, but they preferred their own ancestral cookery to that which they saw among the white men. Likewise, the many Polynesian expeditions that visited Fiji in pre-European times took no interest in importing the Fijian custom of manufacturing pottery. Thus, if another culture had occupied the islands before the Maori-Polynesians arrived, these people might have known how to make pottery without passing the practice on to the pottery-less newcomers.

Whether the earlier island population came from Asia (with Indonesia) or from Peru, it would seem equally impossible that they, having otherwise an advanced culture, were ignorant of pottery in the early Christian centuries, but we have suspiciously little evidence that pottery-making was actually known in the early megalithic island era. Disregarding an unverified native report on potsherds from an ancient Marquesan *pae-pae*, and the equally unverified report of actual pottery having been seen on Easter Island when first discovered (Behrens 1737, p. 135), no concrete evidence exists, apart perhaps from the prehistoric fragments of pottery excavated on Tonga (McKern 1929, p. 115; MacLachlan 1938, p. 65). The present Tongans, of course, had no pottery. But some three thousand prehistoric fragments have been recovered archaeologically on four separate Tongan sites, namely in Tongatabu, Eua, Pangaemotu, and Matutapu. The colour of these fragments was black and red-brown, much as in Fiji. No equivalent discoveries are recorded from other areas of Polynesia, but prehistoric fragments have also been discovered with the megalithic remains on the Mariana Islands, a fact to which we shall return shortly.

failed, and one end was finally cut off to afford an opening. A skeleton lay prone in the centre, others had been sitting around the slab-walls, and the floor was covered with a very deep layer of fine dark dust probably from smouldered organic materials.

Stone monuments of Indonesia

Megalithic monuments of some sort have been left by prehistoric people in various early centres of the world, and one school of diffusionists has attempted to unite all such remains in a common Eurasiatic origin. It is not the purpose of the present study to dwell on these theories, but only to consider the material which in one way or another bears directly on the question of the prehistoric peopling of Polynesia. The Egyptian sphinx and obelisks have but little in common with the easily distinguishable Polynesian anthropoliths as compared with the stone human statues of Tiahuanaco and San Augustín, and the square-based, pointed pyramids of the Nile are remote from the rectangular, terraced pyramidal structures of Polynesia in style, concept and geographic location; but those of Mexico and Peru are indeed very near. It will, however, be necessary to consider the megalithic occurrences in inner Assam and parts of Indonesia, since certain diffusionists have suggested that these may give the clue to the megaliths of Eastern Polynesia.

Disregarding for a moment the geographical complications, we shall travel as the crow flies 90-100 degrees round the surface of the globe from the westernmost Polynesian anthropoliths, found in the Tubuai Group, to their nearest counterparts in Celebes and South Sumatra. Our best source of information on these megalithic sculptures appears to be the interesting work by van der Hoop (1932). Besides giving detailed descriptions, Hoop reproduces an excellent series of photographs. The first impression offered by some of these Indonesian stone sculptures is the same bulky structure with a large head as has already been described from America and Polynesia; a few even have extended ears, with a large circular nugget, as in corresponding monuments from Southern Mexico. On the whole, there is a markedly stronger similarity to South Mexican anthropomorphic megaliths, carved stelae, and stone troughs, than to the erect columnar stone human statues of South America and Polynesia. A number of the Sumatra carvings even display a specific similarity to the ancient Olmec megaliths of Southern Mexico, as may be seen by comparing the two figures on Plate LXII **1** and **2**. On further examination, however, a number of additional features are found in the Indonesian specimens which give them a marked Asiatic stamp and distinguish them clearly as later than Olmec work and knowledge.

Hoop (*Ibid.*, p. 67) says with reference to the 53 anthropomorphic images found: "Frequently these figures are represented with a buffalo; frequently also riding on, standing beside, or in combat with an elephant." Also (p. 74): "As regards the animals represented, we may remark that the elephant is sometimes portrayed as an animal for riding on and sometimes also in combat with Man, but never singly. In one single instance, the buffalo is represented singly, and also frequently as an animal for riding on. . . . It is remarkable that the buffalo is so often represented as riding-animal. This custom occurs in other parts of the world. In Central Asia, the Yak is used not only as beast of burden but also as riding-animal."

We also hear (p. 27) of a damaged monument where "it is still possible to distinguish three human figures, twisted together as if engaged in wrestling. One of the heads is quite discernible while a sword can be seen on the back of another man." Further (p. 74): "Swords occur with seven different images." We learn (p. 92) that these swords, alien to early America and Polynesia, resemble in their bilateral symmetry the Roman sword,

whereas their short and very broad blades make them concur with a form of weapon "met with in various parts of the earth in the *bronze periods*." (Italics by Hoop.)

In this and a subsequent publication Hoop (1933, p. 104) also shows that "much stress is laid on the representation on one of the images at Batoegadja of a bronze drum of well-known type generally regarded as of southern Chinese origin." The author gives much attention (1932, pp. 81-92) to the carving of this identifiable kettle-drum (which occurs in a sculpture including an armoured elephant) as it "assists us enormously in estimating the antiquity of the images." Hoop proceeds to show that about twenty similar kettle-drums were found in the Dong-son graves of Indo-China, probably dating from the Han period (206 B. C. to 220 A. D.)[1] In the same Dong-son graves swords strongly resembling those carved on the Sumatra images also occur, as well as other bronze artifacts corresponding to actual finds in graves associated with the same Indonesian megaliths.

He concludes (*Ibid.*, p. 94): "When we now consider, on one side, the images of the Pasemah [in South Sumatra] and the bronze remains found in South Sumatra and other parts of the Archipelago, and on the other side, the bronze culture of Indo-China, then we may safely assert that the sculptors of the Pasemah had a bronze culture corresponding with that of Indo-China. It may be explained thus that the bronze objects were exported to South Sumatra from Indo-China. The number and variety of the bronze objects, however, found in the archipelago, but more especially the communication made by Dr. Crucq [who found archaeologically a mould for kettle-drums in Bali] make it more probable that the art of casting bronze was also exercised in the Archipelago itself."

Hoop points out that no stone tools were found during the investigation of the sites; the only stone axes collected had been found in the neighbourhood by natives while tilling the soil. He says (*Ibid.*, p. 95): "It would appear, however, from the finding of 'Controleur' Batenburg, that in the Pasemah, as in Indo-China, iron was already known. It is therefore possible that the sculptors employed iron tools. If stone implements have been used these must have been rougher, heavier and less finely executed than those we collected."

It is clear from Hoop's accumulation of evidence, as the author himself stresses, that the Sumatra sculptors had no neolithic culture, but were familiar with the use of bronze. The art of casting bronze was probably either brought with them or borrowed from India or Indo-China. This in itself presents a marked contrast to the Olmec and other pre-Aztec and early Maya cultures,[2] as well as to those of Early Chimu, Paracas, Tiahuanaco, and other South American high-cultures contemporary with Polynesian migrations. Bronze in American was a much later feature, and even then of a limited distribution.

Archaeological evidence from the stone-cist graves associated with the great Sumatran images verifies that, not only was bronze known to this megalithic culture, but iron too had been introduced to a limited extent. (Hoop 1932, p. 47.)[3]

[1] Hoop (*Ibid.*, p. 83) says: "The area over which the kettle-drum is found, includes the whole of South Eastern Asia, with Burma and Insulinde, and extends in the North to Mongolia."

[2] In the Old Maya Empire metal was non-existent. (Morley 1946, p. 449.) Even in the New Empire only neolithic tools were used, although personal ornaments and ceremonial objects were now also made of gold, copper and their alloys, and eventually bronze shortly before European arrival.

[3] Heine-Geldern (1945, p. 150) points out: "...all the stone cist graves and slab built graves of South Sumatra, Central and East Java contained glass beads and metal, bronze, gold, copper or iron. The same was the case in similar graves that have been investigated in the Malay Peninsula."

It is interesting to note that the almost Negroid physiognomy of the Sumatran stone images has caused the belief among some observers that the race which carved these prehistoric monuments might have been Negroid or Melanesian. Hoop (*Ibid.*, p. 77) meets this theory by stating: "If there is insufficient anthropological ground for such a conclusion, from an ethnological standpoint there are positive arguments against it. The Megalith builders in South Sumatra lived, as will be demonstrated later, in the bronze period. They possessed swords and large bronze drums. They wore a rather complicated dress. They adorned themselves with various ornaments, including glass beads in various forms and combinations; they were not ignorant of pottery; they could tame buffaloes and elephants; in the art of sculpture they were well masters; they constructed baths or other water-works, as is apparent from the gargoyle at Pageralam."

The Melanesians and Papuans on the other hand, the author points out, "have never reached the bronze period. They passed from the well-known stone implements to modern import articles. . . . The Melanesians have for weapons wooden clubs and spears, the latter with points of stone or bone. For the rest, they only know the bow and arrow. Metals were unknown before the advent of modern import articles. They do not know the buffalo as domestic animal and the elephant as riding animal. It seems clear, then, that *all* eastern Negroid peoples, or eastern Melanoderms or oceanic negroes, or whatever one likes to call them, stand on a much lower cultural level than our sculptors of South Sumatra." The same argument applies in its essentials not only to the Melanesians, but also to the Polynesians.

Hoop (*Ibid.*, pp. 79, 155) carefully refrains from giving an answer to the question as to which race built the megaliths of South Sumatra. But he tends to the opinion that the physiognomy of the flat and wide-nosed, thick-lipped images "may just as well represent a Malayan type."[1]

Hoop (*Ibid.*, p. 95) shows that stone ancestral images, differing somewhat in style from those of South Sumatra, are known also from the Batak-Lands (*Pananggalan*, *Salak*, *Si Aboe*, *Djamboe*, *Si Antar*): "These are images of men and women on horses and elephants, and also without a riding-animal. They were comparatively recently erected for deceased rajahs, after the last great festival of the dead." Some very primitive stone images are known from Nias and a few other areas. Finally, Hoop (*Ibid.*, p. 96) refers to certain stone statues discovered in the interior hills of Celebes. He describes them as rough upright stones with nothing outlined but primitively shaped heads and genitalia. In all they were "sculptured very roughly and in primitive fashion."

Kaudern (1921) illustrates some others of these pillar-shaped and large-headed Celebes statues, which to the present author would seem to be the only ones west of Polynesia similar enough to those of the East Pacific and South America to warrant a test of kinship with that distant area. However, as both Hoop and Kaudern, with other observers, point out, the Celebes figures are only accessory to a culture whose characteristic feature was the carving of megalithic stone kettles with enormous disc-shaped stone lids, known respect-

[1] If a parallel may be seen in the strongly similar Olmec sculptures of Southern Mexico, it is highly conceivable that the flat-nosed, thick-lipped aspect of a genuine Yellow-brown tribe has been the model of the sculptor in both areas. In primitive sculpture, which does not portray hair and skin-colour, the physiognomy of Yellow-brown tribes will certainly concur much more with the Negroid features than with those of the Caucasoid type.

ively as *kalamba* and *toetoena*, megalithic constructions of a type wholly unknown in Polynesia and America.[1]

We have finally to consider some of the small statuettes or portable stone human (and elephant) figures a number of which have been found, principally in Java. Hoop (1932, p. 99) shows that although these usually were known as images of the "Padjadjaran-type", one writer had tentatively referred to them using "the more general name of Polynesian images", a term which is geographically and chronologically unjustified. Chronologically the figures are severed from East Polynesia (West Polynesia had no statuettes) through the following dating by the same author (*Ibid.*): "It is clear that the sculptors of these artless products have not escaped the influence of the powerful civilization which had spread over the plains. This is proved, in the first place, from the awkward attempts frequently made to make these images resemble prototypes from the Hindu pantheon. Ganeça, especially, seems to have exercised great influence. The second proof is still more instructive, and is supplied by the dates on a few of the images, dates in the characters of the Hindu-Javanese Kawi script. The most remarkable thing is that these dates are comparatively late, not earlier than the 14th century. From this may be deduced that these clumsy representations were executed, and the sacred places ornamented with them, during the resplendent period of the Madjapahit Kingdom and the last days of the Hindu-Javanese civilization, and in any case, that it would be a great mistake to regard them as the products of the Javanese population when they first came into contact with the culture of the Hindus, just arrived from oversea."

These small Hindu-inspired stone figures are not so carved that they could be mistaken for carvings from any of the East Polynesian groups, but it should be admitted that a number of them, such as a kneeling figure holding a bowl between its hands, are remarkably suggestive of early Mexican and Central American statuettes.

Indeed the existence of a limited number of small and recent stone images in Java and its vicinity has no ultimate bearing on the origin of statuettes of comparable size on the far fringe of the easternmost Polynesian islands (distant up wind by some 90 to 130 degrees of longitude) unless they, at least, have an obvious resemblance in style and concept to the images of this area. As this is not so, their significance in Polynesian archaeology is forced, and the more so when we realize that vast quantities of comparable small stone human images, some strikingly similar to those of Eastern Polynesia, are found all along the Pacific slopes of Mexico, Guatemala, San Salvador, etc., right down to Colombia, Ecuador, and pre-Inca Peru, all bordering on the waters of Eastern Polynesia. (See Plate LI.) In the latter case neither geography nor chronology form any obstacles to a down-wind diffusion.

Hoop (*Ibid.*, p. 101) is also careful enough to warn his readers against the danger of associating the small Indonesian stone figures with those found in the remotest islands of Polynesia, as long as proof in the shape of other cultural relics or human remains are wanting. He stresses: "... the fact that one has discovered two analogous works of sculpture in different places, is in itself no proof that these works belong to the same culture or are the products of the same race. ... We forget also too easily the factor of distance in these regions and this is enhanced when data are jotted down on small survey-maps. The marks denoting remains found, then naturally lie close together, thus easily suggesting an association which is by no means proved."

[1] Hoop (*Ibid.*, p. 157) points to somewhat comparable stone mortars in Sumatra and other parts of Indonesia.

Beyer, who held that the *Northern Philippines* and *not* Sumatra or Java, must be suspected of being the Polynesian Fatherland, to judge by a prototype relationship in archaeological stone-adze blades (p. 108 above), dismissed the Java route thus (1948, p. 36): "The total absence in Polynesia of the 'beaked' adze, so characteristic of Java and the Malay Peninsula, seems to favor the northern route and to eliminate the Sunda Islands from the line of Polynesian migration." But when we come to consider another important element of the neolithic culture of Polynesia, namely the stone human statues of the far eastern groups, then the Philippine area in turn fails to make good as a possible centre of diffusion to the east. On this issue Beyer (*Ibid.*, p. 74) says:

"Huge stone figures and effigies, such as those on Easter Island, and the curious monoliths and megaliths of the Marianas and other Pacific Island groups, all seem to constitute an interesting feature of the Late Neolithic culture that is but poorly represented, if not wholly absent, in the Philippines."

When we look back on the megalithic and small stone sculptures of Indonesia, we see not only that a very great portion of the world's surface separates them from eastern Polynesia, but that they are associated with a bronze age culture, or else with the *kalámba*-and-*toetoena* complex, and other cultural characteristics incompatible with Polynesian-South American archaeology. But over and above these discrepancies there is a basic difference in artistic style. The freedom seen to some extent in the carving of the early stelae of Mexico and Yucatan has stiffened in South America into an increasingly pillar-like or columnar effect, found from San Augustín and Ecuador down through Chavín, Huaraz, Pukara, Mocachi, Tiahuanaco and Huancané. This stiff, pillar-like effect has been preserved on all the Polynesian islands, where the statues and statuettes, as in early South America, all stand in a stiff and conventional posture, staring straight ahead, their hands generally placed below the chest. In Indonesian stone carving, apart from the few upright stones in Celebes, this effect is generally entirely reserved.

Summarizing Hoop's megalithic discoveries, Heine-Geldern (1945, p. 149) describes these monuments as follows: "A considerable number of large stone images of a strongly dynamic, agitated style; the very images which Westenenk and other authors had previously referred to as remains of the Hindu period. They represent warriors with helmets and daggers, groups of two or three people, men riding on elephants or buffaloes, an elephant with a warrior on each side, both warriors carrying bronze drums of their backs, a man fighting an elephant, two men fighting a serpent, two tigers pairing, the tigress clutching with her fore paws the head of a human figure, etc."

This dynamic, agitated style marks a pronounced contrast to the megalith art of Eastern Polynesia.

The stone structures in the Naga Hills

Going still further back to the mainland of India, we meet the megaliths in the Naga Hills in the interior of Assam, described by Hutton in his various publications (1921 a; 1921 b; 1922 a; 1922 b; 1926). These carved and raised stones have very little, if anything, in common with the monoliths of Polynesia. Hutton (1922 a) shows from Dimapur that they fall into two different groups; the one form is a Y-shaped or forked monument, and

the other is a large cylindrical stone post. On one of the oldest specimens elephants were carved in relief. These raised monoliths are not carved in human form, and Hutton (1922 b), in dealing with the theories pertaining to this, shows that there are considerations "which support the assumption that Naga monoliths are phallic in origin".[1] (See also Führer-Haimendorff 1938; 1939.)

We have seen that various shapes of terraced or pyramidal sanctuaries have a much wider distribution throughout Polynesia than the stone human statues and cut-stone *maraes*, which were all limited to its eastern side. The concept of superimposing rough stones in cairns, mounds, and platforms as a sanctuary is also too natural and universal to imply far-reaching prehistoric intercourse and diffusion unless supported by geographical reasons and architectural evidence of a more extraordinary character. Since such platforms or terraces exist both east and west of the Pacific Ocean, we shall see, however, if there is any reason to suppose that the Polynesian specimens came up wind alone rather than down wind with the stone human statuary and cut-stone masonry.

Heine-Geldern (1928; 1950 b), perhaps the most vigorous defender of the theory that the East Polynesian megaliths originated in Assam and Indonesia, claims support for this assumption by referring (1950 b, p. 188) to a paper by Hutton on "The Use of Stone in the Naga Hills", where the author "had commented on the close parallelism between certain megalithic structures of the Nagas of Assam and those of eastern Polynesia." It may therefore be reasonable to quote Hutton (1926, p. 73) fully on this point. He says: "What I have called the ceremonial use of stone is almost confined, I think, to the Angami and Kaccha Naga tribes, and is to be associated principally with the erection of stone platforms as sitting-places merely, as dancing-places, as forts or as memorials simply, for these stone platforms generally are intimately associated with the cult of the dead." Hutton also says (p. 74): "Mr Henry Balfour, when visiting Zhotsoma with me, was struck by the likeness of some of the *dahu* there to one type of '*ahu*' in Easter Island, and the description given by Mr. and Mrs. Routledge in vol. li of the *Journal of the Royal Anthropological Institute* (December, 1921) of the '*marae*' of the Society and Austral Islands struck me as most suggestive of the Angami *tehuba*, while in the Marquesas there seem to be paved dancing theatres not dissimilar in construction, actually called '*tahua*', in which, I may add, a game is played on stilts just as the Angami Nagas play it.[2] This syllable *hu* seems to be associated with stone buildings, both in the Naga Hills and in Polynesia, and one wonders whether it can have a similar significance in the place-names of South America in which it so frequently occurs, where there are also megalithic remains. For instance, Tiahuanaco, and Sacsahuaman where there is a fortress built of large stones on what appears to be, from the illustration in the Hakluyt Society's edition of *Memorias Antiquas del Peru* (p. 23), the plan of a typical *dahu*."

Before we go further let us point out a determining geographical fact: the isolated and primitive tribes of inner Assam and Easter Island are on completely antipodal points of the globe and separated by 155 degrees of longitude. Let us next observe that the Assam *dahus*

[1] It is interesting to note with Hutton (1921 a, pp. 232, 362) that some of the Naga tribes made heavy sledges and dragged their stones over the ground. Some tribes also transported their megaliths by building them into a huge frame of scaffolding which was carried by men five or six abreast and twelve to twenty deep.

[2] For further remarks on stilt-dancing see Part IX.

as illustrated by Hutton (*Ibid.*, pl. IV) are built simply of small cubic stones, utterly different from the colossal unsymmetrical and carefully jointed megalithic blocks typical of Easter Island and early Peru. No stone human statues or similar sculptures are associated with these antipodal Assam buildings. The illustrations rendered by Hutton show also that the *dahu* has walls sloping at a plain angle to the ground, as on the Egyptian pyramids, rather than almost vertical like the masonry on the Easter Island *ahu* and on the other elevated stone platforms and terraced pyramids of Polynesia and early Peru. The angularly raised corners on the upper wall of the *dahu* also suggest an Old World fortress,[1] and we are left with the impression that, apart from the attractive similarity of the names, these antipodal structures share nothing but the idea of erecting compact stone mortuary buildings with rectangular base and flat top. This is insufficient evidence to argue a diffusion from one end of the world to the other, between two aboriginal tribes whose cultures are otherwise entirely different.

Nor does the mortuary *tehuba* of the same Naga Hills seem sufficiently ingenious to argue antipodal contact. Hutton's illustration of a *tehuba* (*Ibid.*, pl. III) shows a considerable number of rough stones piled into a simple terrace, with no effort at dressing and jointing them, and with only one big slab that could not be carried by a single individual. He describes the *tehuba* (*Ibid.*) as "a raised level space for dancing sometimes surrounded by separate squared stones on which men can sit with horns of liquor and discuss public affairs, . . . In the wall there are little recesses a foot deep or so in which the sitters can put their cups of liquor."

It is difficult to conceive why we are to go to the end of the earth to find the source of diffusion of a terrace so common throughout Peru, and there even in a form infinitely more akin to that of Polynesia. Hutton's comparison between the *dahu* of the Naga Hills and the terraces of Easter Island was not presented in support of a round the world journey by a Naga tribe. Hutton himself, as we have seen, was the first to add that pre-Inca constructions of Tiahuanaco and Sacsahuaman are *also* built in "the plan of a typical *dahu*".

In his attempt to bring the *dahu*, or fortified small-stone grave, of the Angami Naga Hill tribes eastwards round the world to Polynesia, Heine-Geldern (1928, p. 300) suggests a geographical link in the rectangular graves with sloping sides of un-cut stones in Fiji, and some roughly analogous stone constructions in Nias in the Indian Ocean.

The same year Dixon (1928, p. 250) launched a vigorous attack on the diffusionists who thought that the old brick-built structures of Cambodia in Indo-China might have been the prototype of structures that crossed the Pacific to inspire the Central American pyramids. He shows the loose foundation of such speculations by pointing out that the Middle American pyramids date back to the second and third century A. D., whereas "the oldest of the structures in Cambodia were not built until some five or six hundred years later." Nevertheless Ekholm (1950, p. 344) returned to the subject quite recently by reproducing a highly specialized roofed temple-pyramid from Cambodia together with what appeared to be almost a replica, but built by the Maya on the opposite side of the Pacific. Both these temples were of specialized and extraordinary architecture and yet remarkable

[1] Hutton (*Ibid.*, p. 74) explains that the *dahu* is a construction "which the clan can use as a coign of vantage in a fight with another clan; the Angami weapon of offence is a long throwing-spear, and it can hardly be used effectively against an enemy standing up above, while the latter can use it most effectively upon an enemy down below."

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Cyclopean gateways. **1** The "Gateway of the Sun" at Tiahuanaco. (From *Schmidt 1929.*) **2** The east-west oriented gateway at Tongatabu, Polynesia. (Courtesy: *B. P. Bishop Museum.*) Both are prehistoric monuments of unknown purpose, forming part of no building. They were both possibly associated with solar rituals, since **1** bears a relief of the sun-god and **2** is built to face east-west.

Cyclopean Toltec stone head discovered in the jungle of Southern Mexico. (Photo: *N. G. S.* From *National Geographic Society-Smithsonean Inst. Arch. Exp. to Mexico, 1939-40.*)

Cyclopean stone head of unidentified origin at megalith-site of Pagerlam, South Sumatra. (From *Hoop 1932.*) We should not forget that while Peruvian drift voyages go to Polynesia, those from Southern Mexico would go to the Carolines and Indonesia.

similar, although very unlike any of the plain and truncated terrace-pyramids of Peru and Polynesia. But for the geographical facts and chronological evidence one might for a moment have doubted the justification for Dixon's attitude. Yet Ekholm is personally the first to admit that both these buildings are dateable, and he draws no conclusions, since the Cambodian temple was constructed as recently as the tenth century A. D., while the Maya temple was built about four centuries earlier. This fact, combined with the practical geographical consideration that about 165 degrees of the world's circumference separate the two constructions, with no intermediate architectonic link nor any intermediate land, make it necessary to deduce that we are confronted with independent evolution, or with inspiration brought by weather-driven craft down with the winds and currents from east to west.

The case of the Java pyramids

But the arguments of the pyramid diffusionists are not yet exhausted. In Java, and to some extent in Sumatra, there are stepped pyramidal structures similar to some in Polynesia, Mexico and Peru. They are, however, very near the Cambodian longitude. The few in Sumatra are very primitive in form, consisting, according to Hoop's photographs and sketches (1932, III. 59, 60, 62, 63), merely of a solid pile of boulders and unworked stones, with one exception (*Ibid.*, III. 48, 49) where a flat-topped pile of natural and irregular boulders are thrown together on top of a flat platform of similar boulders, in the form of a two-stepped pyramidal mound with sloping sides. Both structures are small, involve no stone-dressing or organization, and could have been carried out by single natives.

The basic resemblance of these primitive graves to some considerably more involved structures in Western and Central Java have again encouraged theories of a basic connection also with the stepped pyramids of Polynesia. (*Ibid.*, pp. 142, 164.) In these Java structures we find stepped sanctuaries which in general shape—but not in the characteristics of stone-shaping art—certainly have very much in common with the stepped platforms of early America and the far Polynesian islands. But again we ought not to forget the determining factors of chronology and of geographic logic, when called upon to decide the question of trans-Pacific diffusion versus independent evolution. Comparing the Java sanctuaries with those on the opposite side of the Pacific Ocean, we seem to find, as with some of the local statuettes and Sumatra megaliths, more analogies to the prehistoric work in early Mexico than to that of the Polynesian islands. The pyramidal sanctuary of Tjandi Soekoeh of Central Java in particular bears a striking resemblance to some of the ancient constructions of Southern Mexico. But, as Heine-Geldern (1945, p. 153) points out, this terraced Javanese sanctuary is not prehistoric; it was built in the 15th century A. D. The other analogous Javanese pyramids all date from the same recent Hindu period, after the time of Marco Polo, about the 14th and 15th centuries A. D. (*Ibid.*) This developed form can not therefore, have diffused eastwards across the Pacific, and if there is any connection with the architecture of early Mexico at all, the inspiration must have travelled down the wind from the New World only a few generations before Columbus. Heine-Geldern, however, supports (*Ibid.*) the view of Krom and Stutterheim, who have shown that these highly developed Javanese terraced sanctuaries are simply Hinduized versions of the

older primitive local type of terrace and terraced mound. If this implies that we are getting back to such rough and general structures as those of South Sumatra considered above, then independent stone-gathering rather than diffusion of developed architectural style may seem to be the most tenable explanation.

There is, however, one circumstance already mentioned which seems to make it dangerous to reject altogether the possibility of a direct trans-Pacific diffusion. Although we have found chronological and geographical logic to eliminate the possibility that the inspirations can have been carried east, yet it may be difficult to find any evidence that makes a transfer in the opposite direction equally impossible, even in the 14th and 15th century A. D.

It may not be out of place to emphasize here again the enormous importance of distinguishing between voyaging distance and voyaging time in Pacific migrations. (Heyerdahl 1951.) A trans-Pacific migration bringing statues or stepped pyramids from Indonesia to Mexico would have to work its way from island group to island group against the wind; it would require centuries of intermediate island settling, population pressure and continued eastward urge, leaving stone statues and stepped pyramids behind on almost every island group during the process, if the custom was to survive until the ocean had gradually been traversed and the far continent reached. A native of early Mexico on the other hand, could get on board his raft, with or without migratory purpose, and find himself dragged along in the steady sweep of wind and current until he was cast ashore down wind in the Micronesian-Indonesian corner of the Pacific a few months later. Polynesian explorers might also, though not so readily, arrive in the same down-wind corner, though the bulk of Polynesian voyagers and castaways would be swallowed up in the buffer-territory of Papua-Melanesia, where also we have seen that all Polynesian vestiges are found exclusively on the eastern side, as in Micronesia.

If we allow ourselves to picture the unknown people behind the impressive Olmec high-culture of Southern Mexico in possession of rafts and sail such as we shall later see (Part VIII) to have survived along the Pacific coasts of northern South America, then the same Olmecs would—not in a matter of centuries, but in months and weeks—be able to carry inspiration to the alien down-wind cultures of Micronesia, Malaysia, and South China. These direct down-wind voyagers would not, like successive migrants in an opposite direction, leave large monuments on the islands, marking their route. They could even have brought architectural ideas from a neolithic culture area to lands where bronze and iron were known, in any Christian century up to the arrival of Columbus. Only when we resist the deceptive effect of inches and large island captions on a map and face the true dimensions, winds, and mobile waterways of the world's largest ocean, can we judge diffusion in the tropical Pacific on a sound basis. Oceanic diffusion must have a geographical and not a speculative approach. In the Pacific area, only Northwest America and its vicinity are natural recipients from the waters of Eastern Asia; yet Northwest America is a donor to Northern Polynesia. Southern Polynesia is a constant marine recipient from Peru. Melanesia receives what falls away from Polynesia, and so in part does Micronesia. Otherwise Micronesia, and to some extent even the Malay domain, are exposed to nature's shipments from Southern Mexico and adjoining parts of Central America.

Where Malay and Central-American parallels occur, we must still bear in mind the

possibility of common inheritance from an ancestral Yellow-brown race which sent an original primitive branch the northern way along the Aleutian Islands into the New World. Only parallels beyond the scope of this original unity may fairly be attributed to vestiges of a short-cut drift *westwards* across the ocean, or regarded as independent evolution in these two areas.

This is not the place to dwell on the geographical existence of a westbound sea-road stretching from what were once early Olmec and Maya habitats down to Micronesian waters and the adjoining coasts of the Old World. It is of direct importance to the Polynesian problem, however, to note that this ever-present possibility of North Equatorial transfer would have no effect on Polynesia. The natural course of a drift by sea from prehistoric Mexico would—as in the time of the first Spanish caravels—pass westwards through the wide open latitudes separating Hawaii from the rest of Polynesia which is centred south of the Equator. There are ethnographic peculiarities which may be better understood, or at least deserve a new test by trans-Pacific diffusionists, when it is realised that neither the Marianas, the Carolines, Yap, the Palaus, nor perhaps even Malaysia, are protected by nature from drifts beginning in Central American waters; although all this westward rotating wind- and water-waste successfully isolates America from Cambodian visitors.

The megaliths of Micronesia offer no stepping-stones to Polynesia

We have already stressed that the tiny and widely flung isles and atolls of Micronesia do not form, as a map may suggest that they do, a practicable island bridge into the Central Pacific. Micronesia is in reality a wide ocean in itself, as large as that which separates North America from Europe and Africa, and the combined island area is roughly that of the Shetlands. On none of the islands in this vast territory, whether volcanic or coral atolls, have stone human statues or statuettes been left. There are no carved monuments of any type in Micronesia, with the exception of such strictly local features as the large stone money on Yap, and the rows of mushroom-shaped pillars which abound in the Marianas. None of these features find any parallels in Polynesia.

We have seen that the Micronesians, in many important features, are racially and culturally distinct from the Polynesians. Micronesia has often been considered a melting-pot of neighbouring races with some unidentified local element. A Melanesian strain has frequently been suggested, and Polynesian infiltration has certainly taken place on the easternmost groups, while the Palaus are strongly marked by their close proximity to the Malay domain. We have seen that these islands are in the straight sweep of the main current from Southern Mexico. Also, as previously mentioned, the current which reaches Hawaii from Northwest America turns west in lower latitudes and bears down upon Micronesia. It is therefore noteworthy to find that Boas (1925, p. 28) wrote: "There are also similarities that lead us to suspect contact between Micronesia and Northwest America, but all of these do not affect the main current of American cultural life."

Whatever may be the principal contributor to the main racial element in present-day Micronesia, no degree of high-culture was maintained on any of its islands when discovered by Europeans. Yet, although stone statues and carved masonry as known from Peru and Polynesia never reached the Micronesian domain, abandoned ruins from a prehistoric

culture period have been found, showing that some sort of high-culture must either have passed through, or at least have flourished locally in former times. Allen (1884, p. 251) says with respect to these prehistoric ruins: "The present inhabitants are mere savages. We seem driven to accept the theory of an ancient civilization—spreading over the Pacific—whose history has yet to be unravelled."

This statement will seem extravagant to those who consider most cultures as due to local evolution, but it is difficult to understand why we should imagine that a primitive native family must have developed locally all traces we find scattered about of some bygone aboriginal civilization. In Micronesia and Polynesia alike this would imply that the founders of the local civilizations first discovered the islands while mere savages, then evolved a civilization on some tiny island under the most unfavourable conditions, and yet had time to leave their amazing achievements in ruin long before the arrival of the Europeans, and even earlier than the historic island tribes can remember. Is it not more logical to assume that the same aborigines discovered the islands at the peak of their own continental civilization, and then gradually lost their former standards in the course of their oceanic isolation, or on the subsequent arrival of the present Yellow-brown occupants?

It is important to note that none of the bronze or other metal objects typical of the stone cist graves of Indonesia have been found in Micronesia, nor any other relics indicating that any of the known civilizations of Asia had colonized or even found these isolated islands before the arrival of Europeans. Pottery was known in historic times only among the tribes in the extreme southwest corner of Micronesia—on Yap and the Palaus—but prehistoric fragments have been found in Guam, Saipan, Rota and Tinian of the Mariana Islands. (Thompson 1932, p. 24; MacLachlan 1938.) It is interesting that Beyer (1948, p. 75) points out that the *coiled* pottery occurs in Micronesia. He says in this connection: "In the Pacific region this type of pottery is found only in Melanesia— . . . Elsewhere, coiled pottery is found chiefly in northern Asia and the Americas—while it is wholly absent from Southeastern Asia and Malaysia."

We have seen also that the Marianas is the only Micronesian locality where carved upright pillars have been raised. But these are neither statues nor curb-stones of a *marae*-like enclosure; they were erected in double rows like short stone avenues. These structures are all prehistoric remains of unknown origin.[1] Each pillar generally consists of a cut coral limestone upright, capped with an upturned coral stone of hemispherical shape. Both upright and cap may vary considerably in shape and size; there are even instances of their being cut from sandstone or hard island rock. The cross-section of the upright is often rectangular, sometimes narrowing upwards, whereas the cap is generally, but not always, circular or oval in cross-section. The largest specimens in Guam rarely exceed seven feet, but on Tinian capped uprights are sixteen feet high. (Thompson 1932.) But for the peculiar shape of these capped pillars, the general idea of megalithic "stone avenues" occurs in Central America and in Indonesia. In Central America these uprights are sometimes carefully shaped.

[1] Thompson (1932, p. 8) says: "Hidden in the jungle along the shores and in well-watered interior lowlands of Guam are double rows of upright monuments associated with caps and accompanied by burials, potsherds, and stone and shell implements. These monument sites are called *latte* or *casas de los antiguos* by the natives, who believe that they are haunted by *Taotao Mana* (people of beforetime). The natives carefully avoid these sites."

In any case the Mariana Islands are quite off the road for any migrants from Indonesia to Polynesia, especially for anyone heading for the megalith centres of the latter territory. It is hard for the modern traveller to grasp that even the Marianas are geographically located far enough up against the wind from the apparently "nearby" coast of Asia to be, nautically speaking, best approached by prehistoric craft from distant America. History will best illustrate this peculiar fact. It was Magellan who first discovered the Marianas in 1521 after crossing the entire Pacific from the New World side. The second and third visits came respectively from the southern and northern extremities of South America. (Loyasa in 1526; Saavedra in 1527.) From then on the Mariana Islands became regular stopping places for the Spanish galleons en route from Mexico to the Philippines, and they were even governed by the Viceroy of the City of Mexico. (Thompson 1932.) The North Equatorial Current and the trade wind that sent the Spaniards across from Mexico presented a serious obstacle to their return voyage, and only their knowledge of the fact that Mexico existed in the direction whence they had come encouraged them to make a long return voyage in a large semi-circle north of Hawaii. We note with Thompson (*Ibid.*, p. 52) that even in the Marianas the Spaniards found the inhabitants without swords, or even bow and arrow, whereas, as Gobien said: "They throw stones from their slings with so much force that they are often found sticking fast in the trunks of trees." They also had primitive spears with a pointed head of human bone. This war equipment in the 16th century would not indicate close relations with the high-cultures of the Old World.

All the other Micronesian islands and atolls were discovered after the Marianas,—for example the Palaus, apparently so close to the Philippines, in 1543 (by Villalobos), and many islands even in much later times; all as a consequence of the European discovery of the Americas, with their natural eastern entrance to the open Pacific.

Christian (in Enoch 1912, p. 282) describes lonely Yap, between the Marianas and the Palaus, as being "full of relics of a vanished civilization—embankments and terraces, sites of ancient cultivation, and solid roads neatly paved with regular stone blocks, ancient stone platforms and graves, and enormous council lodges of quaint design." Yap is also well known for the colossal perforated limestone discs exhibited in front of the houses and used by the present inhabitants as currency. The actual origin of these large stone wheels, from six to twelve feet in diameter, is not known, beyond the fact that they were quarried and shaped on Babelthuap Island in the Palaus, whence the larger ones were brought to Yap on rafts. (Furness 1910, p. 93.) Although there is possibly no connection, colossal perforated stone discs of somewhat similar nature have been reported from various parts of tropical America; one specimen found archæologically on the Ecuadorian coast is in the Municipal Museum of Guayaquil, and two or three are described by Verrill (1929, p. 271) and Bennett (1934, p. 444) from the ruins of Tiahuanaco.[1]

[1] Verrill says: "Perhaps the most puzzling objects among these ruins are two immense stone discs or wheels which I discovered on my last visit to Tiahuanaco. One of these is completely buried under the fallen masses of stone and only its edge is visible, while the other was concealed under small fragments and is now completely exposed. It is about seven feet in diameter, about sixteen inches in thickness, and has a square hole in its centre. It is made of the same stone as the ruins themselves and its surfaces show the same type of tool marks and the same character of workmanship." Bennett describes also from Tiahuanaco what he refers to as a "Ceremonial Grindstone" 63 cm in diameter, 16 cm thick and with an ornamental wavy band carved in relief against the outer edge.

The Carolines is a group of tiny atolls and islets spread over a distance of 1 500 miles, with its *eastern* extremity represented by lonely Kusaie. From the *east* coast of Kusaie Hernsheim (1883) writes: "Here we also find ruins of huge stone structures, which by themselves still certify that Kusaie was previously inhabited by a stronger and more intelligent human race, and that it also must have been more densely populated. Right behind the village (Lele) these colossal walls commence, and they cover almost the entire island. We found some walls upwards of 30 feet high and 15-18 feet thick. The lower part consisted of rounded basalt-blocks, many of which according to our estimation must have weighed 4-5 thousand pounds. The intermediate space was filled with small stones without cement, and higher up the construction was carried on with hexagonal columns, a form in which the basalt frequently occurs. Moss and splendid foliage covers the dark walls which run in all directions. They generally enclosed irregular squares, into which we climbed through great openings half filled with boulders... the ground was often paved with flat slabs of stone..."

Hernsheim also points out that these large stones "must have been obtained in the most distant part of Ualan, in as much as these basaltic blocks and columns only exist there. Whether rafts were constructed to fetch those giant blocks, or, whether roads led straight across the island through the jungle, remains an open question, as the frail canoes cannot come into question here. ... Narrow trenches run along the outside of the walls and lead into wide canals which at high tide are navigable by canoes and connect with the harbour."

A prehistoric culture has also left megalithic ruins at Nan Matol on the southeast coast of Ponape, another volcanic isle in the east end of the Carolines. Both cultural evidence and tradition, as Christian (1899, p. 83) emphasizes, indicate that these abandoned constructions, too, "were erected by a race preceding the present inhabitants of Ponape". The writer declares that dark-skinned Melanesian-like individuals are still seen on the island, whom the other natives point out as descendants of a former small black race that did the work of the ruined constructions. Legend also holds that there were some mythical twin brethren, Olo-sipa and Olo-sopa, who were responsible for the building of Nan Matol.

J. M. Brown (1927, p. 98) found little encouragement for any theory of submergence in this western part of the ocean. "To see Nan Matol on Ponape," he wrote, "with its canal streets is more impressive than to see the great stone structures of the Andes. ... The holy city has not sunk but been built on artificial islands with water streets. Its founder was not a coastal sailor but an oceanic conqueror. He brought kava and that could not have come from the west, but from Polynesia." Further (1915, p. 155): "Here is a Venice that with its public buildings made of immense basaltic crystals brought from twenty miles distance is said to cover eleven square miles. I spent several hours canoeing along the water-streets and yet left many island blocks with their buildings unvisited. The right-angled islets have been artificially formed on the flat surface of the reef. A great breast-work from five to six feet high has been built of huge basalt beams, some of them four or five feet in diameter. The space enclosed has then been filled up with coral debris. On each of them has been erected an edifice with walls from six to fifteen feet thick of the same columnar basalt. The largest that remains, Nan Tauach, I examined with some care. Part of its walls is still thirty feet high. But the hundreds of great stones that cover the

floor and are strewn around seem to indicate that they were once at least another ten feet higher. The entrance is spacious and stepped; and in front of it stand basalt columns on end whereon the priests are said to have made the kava to offer to the gods and the chiefs. A bench about ten feet high and broad runs around the inside of this great wall and a less broad platform runs around the outside of the inner courtyard. The inner and outer walls are about thirty feet apart. And in the centre of this eighty-five by seventy-five feet court is a megalithic altar which has evidently had the vault below used as a burial place, probably of the kings. . . . The founders of the city and the empire that it must have ruled were manifestedly sailors who came from the southeast. For Metalanim has inside its long breakwater water-squares and water-streets for the manoeuvring of great fleets of war-canoes, and it is on the southeast of Ponape and has its only available deepwater entrance on the east."

The same writer points out that some German anthropologists claim to have found "the American Indian physiognomy in the east of the Carolines," and Barreiro (1920) affirms that he found affinities between the speech material of the Caroline islanders and certain Mexican tongues.

Partly quoting Christian's description of the ruins of Nan Matol, Enock (1912, pp. 285, 288) wrote: "An ancient native fortress is described, terraces and a pyramid with a great lodge on its summit platform 'very much like one of the Mexican teocalli or truncated pyramids.' On the textile fabrics depicted of these people appear patterns which seem to bear some similarity to some of Mexico and Peru. . ." Also: "Among the articles found by digging were circular rose-pink beads, minute and delicate in design, formed of shells rubbed down and 'answering exactly to the wampum or shell bead money of the North American Indians. Beads exactly similar in design have recently been discovered in the ruins of Mitla, in Central America.' "[1]

Such beads are not found in Polynesia. It is also remarkable that it is the Central American form of shell bead rather than the Indonesian type which is excavated in the Carolines. Beads were as significant in Indonesia as in Central America, but we meet them here in an essentially different form. The Indonesian beads are made from glass in many colours, from a yellow-brown hard-baked clay, or from a pale red agate; glass and clay beads were found by Hoop, together with metal, in the stone cist graves associated with the South Sumatra megaliths. (Hoop 1932, p. 133, pl. 171, etc.)

Hoop (*Ibid.*, p. 135) observes, with Beyer and Dixon, that recent archæological finds in the Philippines show prehistoric glass beads to be here directly associated with iron knives, daggers, axes and spear points in that area. He quotes Dixon on these finds: "Now both the iron and glass objects are similar to and in some cases identical with, the prehistoric glass and iron finds in the South of India. . . . As finds of similar glass beads and bangles have recently been made in the Malay Peninsula, in dolmen tombs in Java, and in North

[1] The same authors says: "A series of huge steps brings us into a spacious court-yard. . . In the inner terraced enclosure lies the great central vault or treasure-chamber identified with the name of an ancient monarch known as Chau-te-reul or Chau-te-leur. Chau was the ancient Ponape word denoting (a) the sun, (b) a king. The latter signification tallies with the Rotuma Sau, a king, and the Polynesian Hau and Au, a king, chief." He might have added that it also tallies with *Ahau*, the ancient designation for "king" in Guatemala, Central America. (See also Part X.)

Borneo, the inference is inescapable that we have clear evidence of a trade contact between the northern Philippines and southern India, running well back into the first millennium B. C."

Dixon shows with regard to the Philippine glass beads that some of the associated iron objects "were of local manufacture, since deposits of iron slag and evidences of iron smelting have been found. It is uncertain as to the glass, but unfinished beads adhering to each other in series of half a dozen or more are found and clear evidence of the repairing of broken bangles." Showing that southern India "becomes a way station between western Asia and the Philippines" in the diffusion of glass beads, Dixon says: "That the knowledge of glass-making reached it from western Asia is extremely probable, either by way of sea trade with southern Arabia, Mesopotamia and Egypt, or possibly overland."[1]

We have previously seen (Part I) that beads found in the highest inhabited area of central Borneo have been identified even with ancient material from B. C. Damascus and Ur of the Chaldees. There is accordingly evidence to show that glass beads had leaked from the great civilizations of the west and into the semi-continental culture-area of Malaysia at a very early period, to be deposited right across the archipelago and even in graves and strata pertaining to the megalithic workers. This again goes to demonstrate that Indonesia and Micronesia are each part of its own distinct cultural drainage area. Indonesia is in its natural geographical lay-out directly exposed to trade and other influence from the Old World; oceanic Micronesia, however, like Polynesia, is out of the natural reach of these impulses. The two latter regions are both located in the midst of the natural drainage area of the New World, each at the down-wind end of a powerful oceanic drift beginning respectively north and south of the Equatorial doldrums, in Mexico and in Peru.

[1] For ancient glass beads in the Philippines see also Beyer (1948, p. 64).